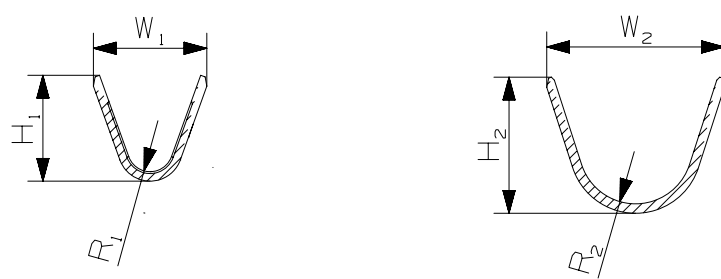
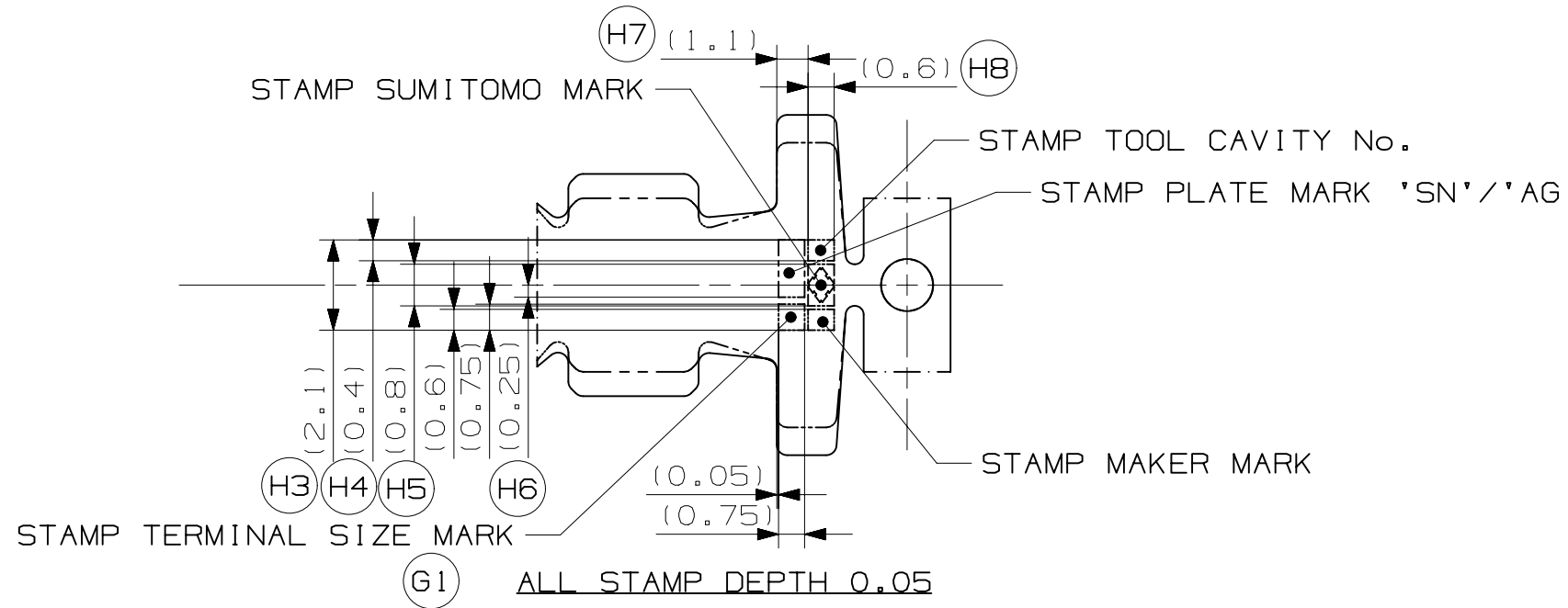
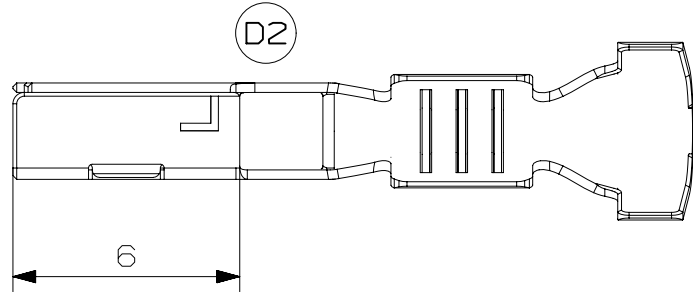


FORD PART NO.	SUPPLIER PART NO.	DESCRIPTION	TRC(S)	GREASED Y / N	BASE MATERIAL	TOP PLATING MATERIAL	TOP PLATING THICKNESS (µm)	SUBSTRATE PLATING MATERIAL	SUBSTRATE PLATING THICKNESS (µm)	COPPER WEIGHT (g)	TOTAL WEIGHT (g)	MATERIAL THICKNESS (mm)	MAX. AMBIENT TEMPERATURE (°C)	CONDUCTOR MIN/MA X CSA (mm²)	INSULATION MIN/MAX OD (mm)	VIBRATION CLASS
EU5T-14474-DAB	8240-0509	1.2mm SEALED FEMALE S-TYPE	8837	N	C2600R-H	Sn	0.8-1.5	Cu	0.5-2.0	0.17g	0.24	0.25	125	0.35-0.5	1.2-1.85	V3
EU5T-14474-EAB	8240-0510	1.2mm SEALED FEMALE M-TYPE	8837	N	C2600R-H	Sn	0.8-1.5	Cu	0.5-2.0	0.18g	0.24	0.25	125	0.75-1.0	1.70-2.34	V3
EU5T-14474-FAB	8240-0511	1.2mm SEALED FEMALE S-TYPE	8837	N	C2600R-H	Ag	1.0-3.0	Cu	0.5-2.0	0.17g	0.24	0.25	150	0.35-0.5	1.2-1.85	V3
EU5T-14474-GAB	8240-0512	1.2mm SEALED FEMALE M-TYPE	8837	N	C2600R-H	Ag	1.0-3.0	Cu	0.5-2.0	0.18g	0.24	0.25	150	0.75-1.0	1.70-2.34	V3

(C1)



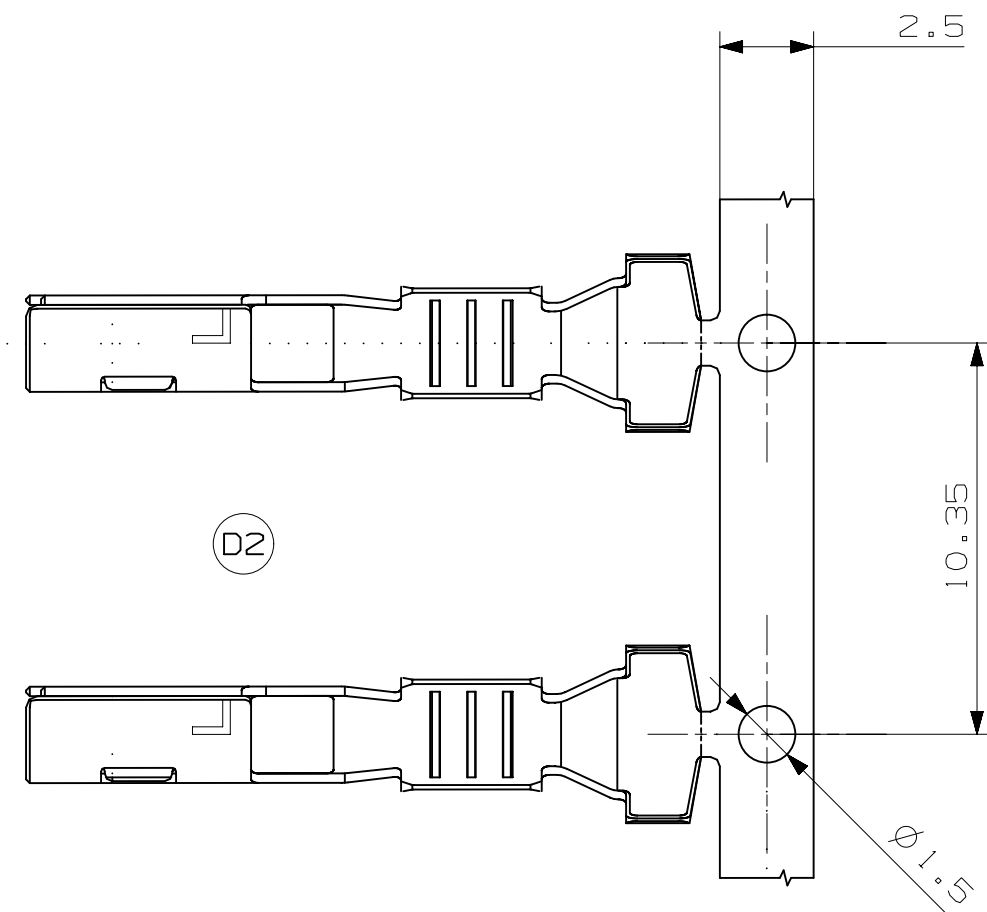
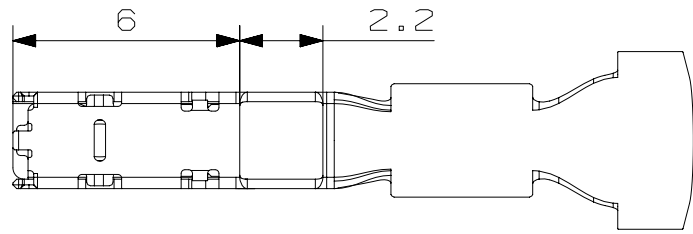
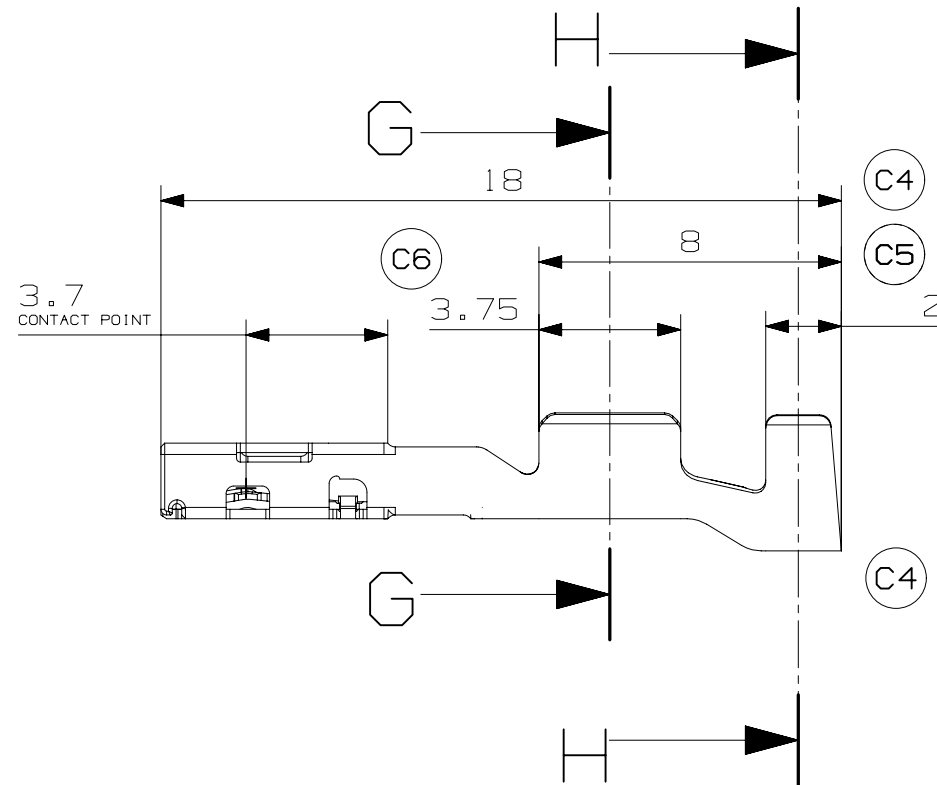
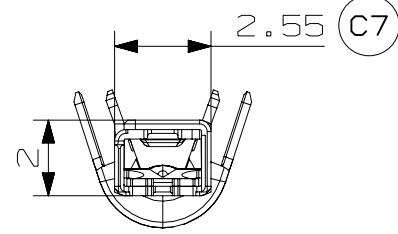
SECTION G-G

SECTION H-H

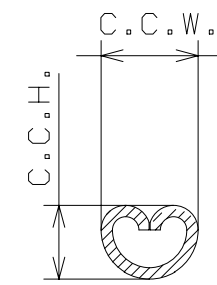
$\textcircled{E1}$	$\textcircled{E1}$				
W_1 ± 0.3 (mm)	W_2 ± 0.3 (mm)	$\{H_1\}$ ± 0.2 (mm)	$\{H_2\}$ ± 0.2 (mm)	R_1 ± 0.15 (mm)	R_2 ± 0.15 (mm)
2.6	4.3	2.2	3.4	0.5	1.3
3.0	4.95	2.8	4.0	0.6	1.5
2.6	4.3	2.2	3.4	0.5	1.3
3.0	4.95	2.8	4.0	0.6	1.5

$\textcircled{C2}$ $\textcircled{C3}$

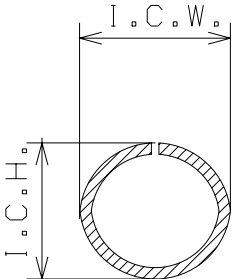
$\textcircled{C2}$ $\textcircled{C3}$



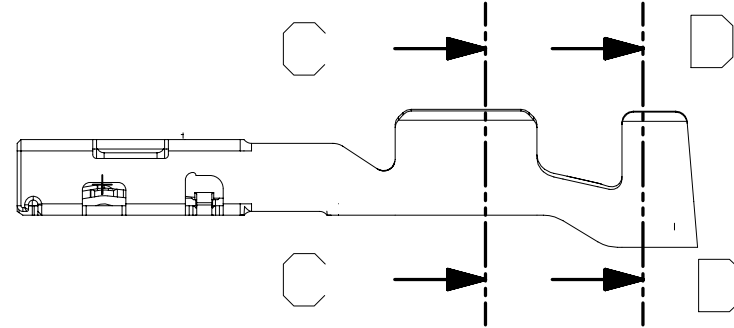
CRIMP INFORMATION
(FOR REFERENCE ONLY)



SECTION C-C



SECTION D-D

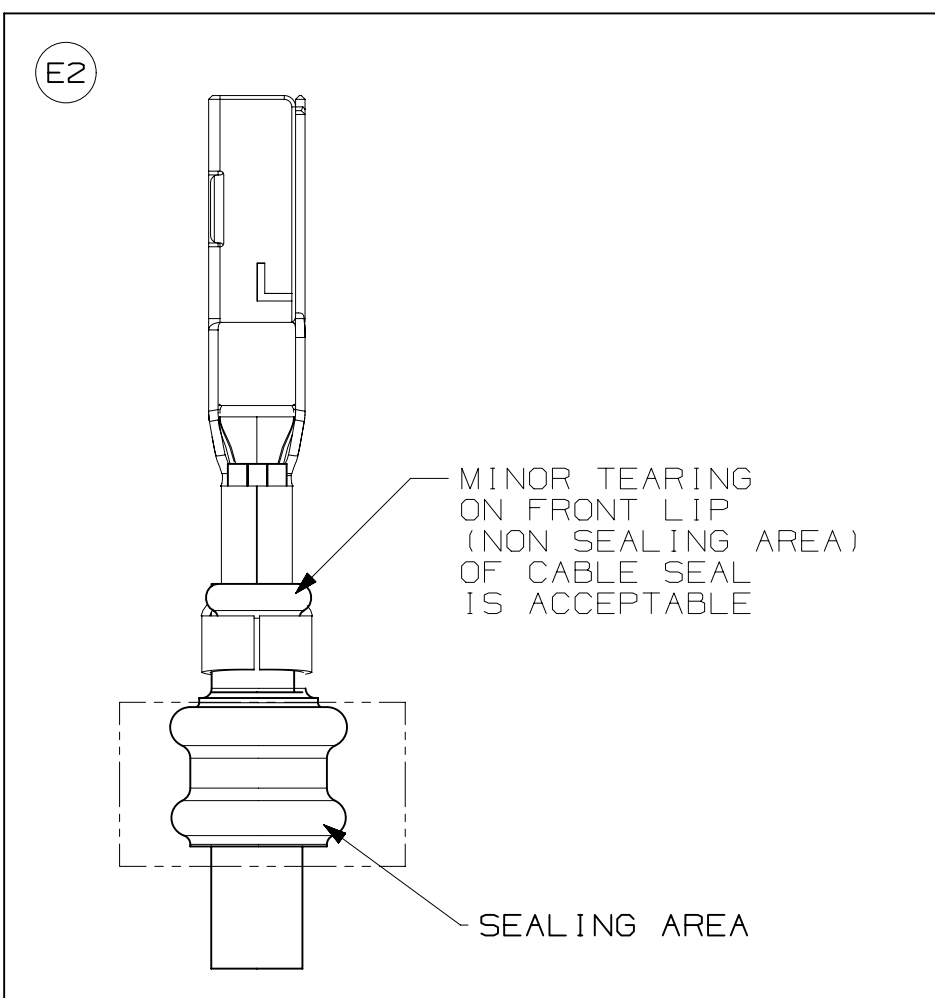


SEE
CHART

STRIP LENGTH

TERMINAL CRIMP AND GRIP REFERENCE TABLE									
FORD PART NO.	WIRE SEAL PART NO.	WIRE TYPE / SPECIFICATION (DESIGN INTENT)	WIRE SIZE (AWG/mm ²)	STRIP LENGTH (±0.5mm)	CONDUCTOR CRIMP		INSULATION CRIMP		Notes
					C.C.W (±0.05mm)	C.C.H (±0.05mm)	I.C.W (±0.1mm)	I.C.H (±0.05mm)	
EUST-14474-DAB EUST-14474-FAB	HU5T-10C930-HA	ESB-M1L120-A	AWG 22	5.0	1.85	0.97	3.0	3.00	*5
		ESB-M1L123-A	AWG 20	5.0	1.85	0.95	3.0	3.15	*6
	HU5T-10C930-JA	ES-AUST-1A34B-AA	0.35mm	5.0	1.85	0.97	3.0	2.60	*1
			0.5mm	5.0	1.85	0.95	3.0	2.90	*2
EUST-14474-EAB EUST-14474-GAB	HU5T-10C930-GA	ESB-M1L120-A	AWG 18	5.0	2.05	1.05	3.25	3.35	*7
		ESB-M1L123-A	AWG 16	5.0	2.05	1.25	3.25	3.60	*8
	HU5T-10C930-HA	ES-AUST-1A34B-AA	0.75mm	5.0	2.05	1.05	3.25	3.05	*3
	HU5T-10C930-GA		1.0mm	5.0	2.05	1.20	3.25	3.35	*4

F1



NOTE :

1. PARTS CONFORMS TO ALL APPLICABLE SECTIONS OF
FORD SDS VER 21
2. PARTS CONFORMS TO ALL APPLICABLE SECTIONS OF
SAE/USCAR-2 REV5
SAE/USCAR-12 REV2
SAE/USCAR-21 (UNDER VALIDATION)
3. MAXIMUM MATING FORCE FOR SINGLE
S_n TERMINAL IS 6.5N
A_g TERMINAL IS 7.4N

4. N/A

5. CAVITY SPECIFICATIONS, SEE SHEET 2.
6. USCAR-21 VALIDATED CRIMP TOOL DIMENSIONS TBD.

(H2)

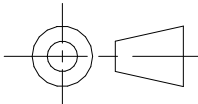
- ```

7. [METRIC WIRES]
*1 SEAL RETENSION FORCE IS 7.3N
*2 SEAL RETENSION FORCE IS 6.8N
*3 SEAL RETENSION FORCE IS 6.1N
*4 SEAL RETENSION FORCE IS 5.5N
[AWG WIRES]
*5 SEAL RETENSION FORCE IS TBD
*6 SEAL RETENSION FORCE IS TBD
*7 SEAL RETENSION FORCE IS TBD
*8 SEAL RETENSION FORCE IS TBD

```

| GENERAL TOLERANCES |           |      |
|--------------------|-----------|------|
| OVER               | LESS THAN |      |
|                    | 10        | ±0.2 |
| 10                 | 50        | ±0.3 |

|                |
|----------------|
| EU5T-14474-EAB |
| EU5T-14474-FAB |
| EU5T-14474-GAB |

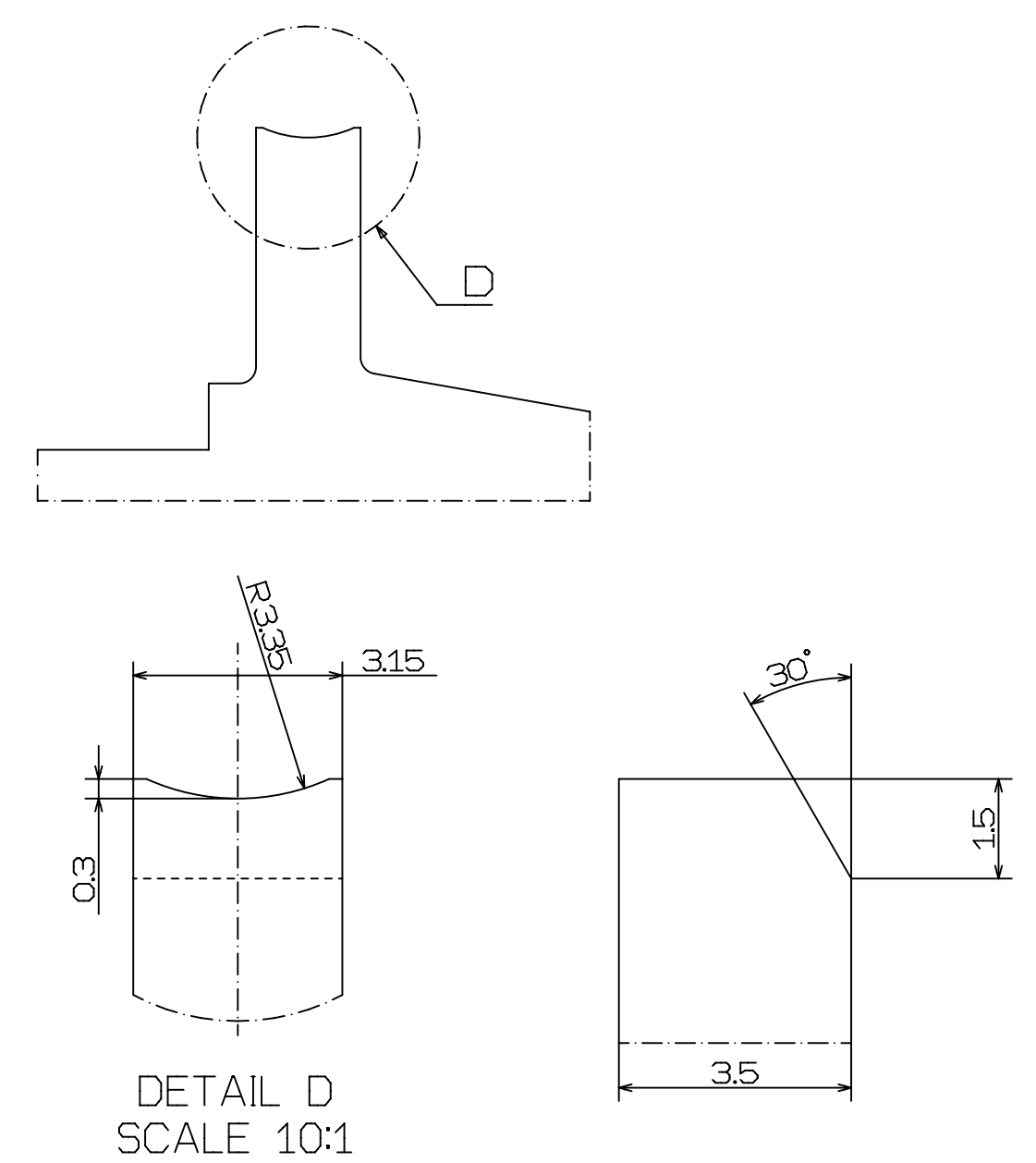
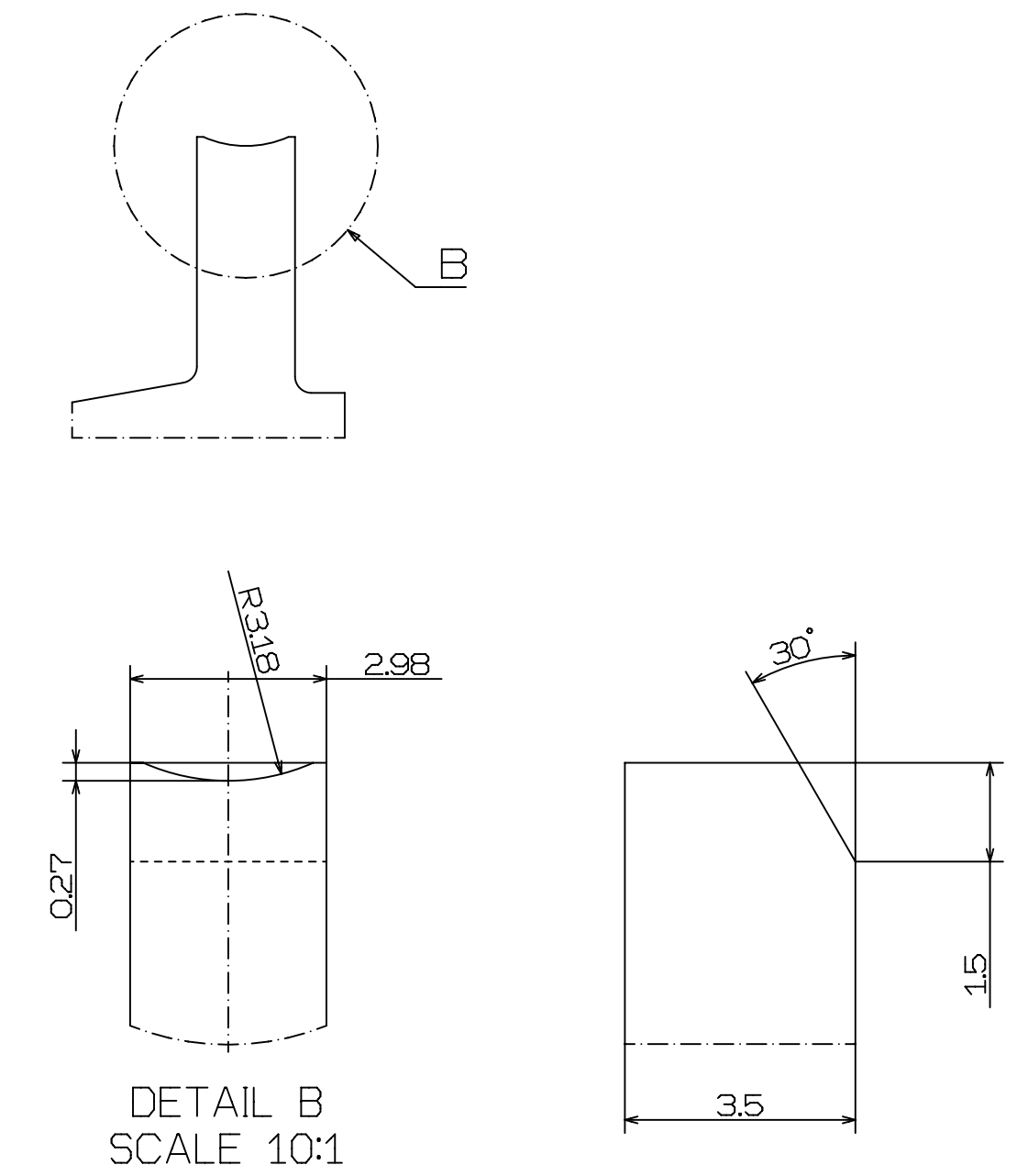
|                                                                                                                                   |                   |                                                                                                                                          |                   |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| REFERENCE    SEALED    1.2 FEMALE TERMINAL                                                                                        |                   |                                                                                                                                          |                   |
| PART MUST COMPLY WITH RESTRICTED SUBSTANCE MANAGEMENT STANDARD<br>WSS-M99P9999-A1 TO SAFEGUARD HEALTH, SAFETY AND THE ENVIRONMENT |                   |                                                                                                                                          |                   |
| DRAFTED IN ACCORDANCE WITH FORD MOTOR<br>COMPANY ENGINEERING CAD AND DRAFTING<br>STANDARDS VERSION 18                             |                   |  3RD ANGLE PROJ<br>DIMENSIONS ARE<br>IN MILLIMETERS |                   |
| CAD TYPE<br>Z-NX                                                                                                                  | CAD LOC.<br>OTHER | CAD FILE<br>EU5T-14474-DAB                                                                                                               | DTMC<br>IS MASTER |
| OPER NO.                                                                                                                          | UNIT              | DRAWING<br>EU5T-14474-DAB                                                                                                                |                   |
| DESIGN<br>JL                                                                                                                      | DETAIL<br>JL      | TITLE<br>TRMNL WIR SNP ON FEM                                                                                                            |                   |
| CHECKED<br>MS                                                                                                                     | SAFETY            | SHT 1<br>OF 3                                                                                                                            |                   |
| SCALE<br>5:1                                                                                                                      | DATE<br>20121119  | DIVISION<br>PLANT -                                                                                                                      |                   |

*Ford Motor Company*

JRW SIZE A1/D



## INSULATION ANVIL

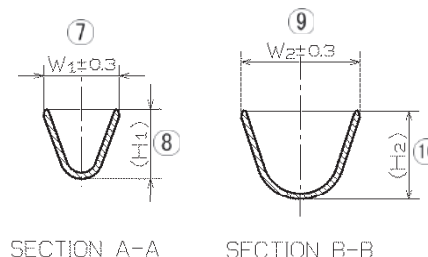
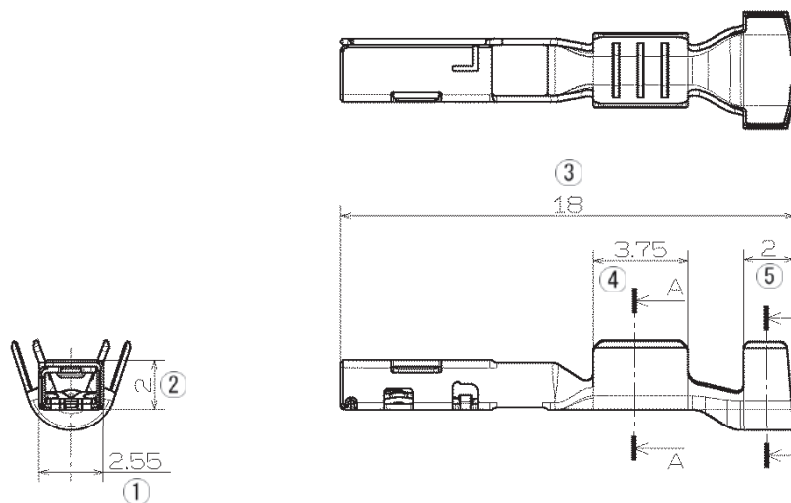


圧着部寸法  
DIMENTION OF CRIMPING WING

| 符号<br>ISS. | サイズ<br>SIZE | H1    | H2    | W1  | W2   | N    |
|------------|-------------|-------|-------|-----|------|------|
| ①          | S           | (2.2) | (3.4) | 2.6 | 4.3  | 0.75 |
| ②          | M           | (2.8) | (4.0) | 3.0 | 4.95 | 0.85 |

適用電線表  
APPLICABLE WIRE SIZE

| 符号<br>ISS. | サイズ<br>SIZE | 電線種<br>WIRE TYPE | 電線サイズ<br>WIRE SIZE      |
|------------|-------------|------------------|-------------------------|
| ①          | S           | TXL<br>(AWG)     | 22~20                   |
|            |             | CHFUS<br>(ISO)   | 0.35~0.5mm <sup>2</sup> |
| ②          | M           | TXL<br>(AWG)     | 18~16                   |
|            |             | CHFUS<br>(ISO)   | 0.75~1.0mm <sup>2</sup> |
|            |             | AESSX<br>(JASO)  | 1.25mm <sup>2</sup>     |



| ②          | 12 SEALED 2PIECES<br>FEMALE TERMINAL M SIZE (Sn) |           |                 |              | 8240-0510           | TER-WUS120FMSN       |
|------------|--------------------------------------------------|-----------|-----------------|--------------|---------------------|----------------------|
| ①          | 12 SEALED 2PIECES<br>FEMALE TERMINAL S SIZE (Sn) |           |                 |              | 8240-0509           | TER-WUS120FSSN       |
| 符号<br>ISS. | 名 称<br>DESCRIPTION                               | 数量<br>QTY | 材 質<br>MATERIAL | 色 相<br>COLOR | 部 品 番 号<br>PART NO. | 登 録 名 称<br>PART NAME |

|                                                      |  |                                              |  |                                        |  |
|------------------------------------------------------|--|----------------------------------------------|--|----------------------------------------|--|
| 材 質 MATERIAL<br>BODY : C2600R-H<br>SPRING : C7035-EH |  | 板 厚 THICKNESS<br>BODY : 0.25<br>SPRING : 0.2 |  | 登 録 名 称<br>PART NAME                   |  |
| 仕 上 FINISH<br>Sn PLATING                             |  | 尺 度 SCALE<br>5:1                             |  | 上 記 参 照<br>SEE ABOVE TABLE             |  |
| 色 相 COLOR                                            |  | 質 量 MASS                                     |  | 管 理 番 号<br>REFERENCE NO.               |  |
| 承 認 APPROVED                                         |  | 検 図 CHECKED                                  |  | 部 品 番 号<br>PART NO.                    |  |
| 16.01.09<br>K.Yamashita                              |  | 16.01.09<br>K.Uezono                         |  | SEE ABOVE TABLE                        |  |
|                                                      |  | 設 計 DESIGNED                                 |  | 名 称<br>DESCRIPTION                     |  |
|                                                      |  | 2016/01/08<br>Y.KITAGAWA                     |  | 1.2mm防水メス端子(Sn)                        |  |
|                                                      |  | 2016/01/08<br>H.KANGYU                       |  | 1.2 SEALED 2PIECES FEMALE TERMINAL(Sn) |  |
| 角 度 ANGLE                                            |  | 三 角 法<br>THIRD ANGLE PROJECTION              |  | Sumitomo Wiring Systems, Ltd.          |  |

| 一 般 公 差 表<br>GENERAL TOLERANCES |                  |      |
|---------------------------------|------------------|------|
| 以 上<br>OR OVER                  | 未 満<br>LESS THAN |      |
| 10                              | 10               | ±0.2 |
|                                 | 50               | ±0.3 |
|                                 |                  |      |
|                                 |                  |      |
|                                 |                  |      |
|                                 |                  |      |
|                                 |                  |      |

Supplier

Sumitomo Wiring Systems, Ltd.

Part Certification

## PROCESS FLOW DIAGRAM

| Family name                                                                                                                                                                      |     |      |       |      | Date (Orig.)                                 | 17.Nov.'14 |                          |        |                         | Prepared by  | Sumitomo Wiring Systems,Ltd. |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|-------|------|----------------------------------------------|------------|--------------------------|--------|-------------------------|--------------|------------------------------|--|--|--|
| Part Number                                                                                                                                                                      |     |      |       |      | Date (Rev.)                                  | N/A        |                          |        |                         | Title        | N/A                          |  |  |  |
| Part Name                                                                                                                                                                        |     |      |       |      | Page                                         | 1 of 15    |                          |        |                         | Phone Number | 81-59-382-8867               |  |  |  |
| Cross Functional Team Members                                                                                                                                                    |     |      |       |      |                                              |            |                          |        |                         |              |                              |  |  |  |
| <div> <div>Engineer Section</div> <div>QA Section</div> </div> <div> <div>D.Hirasawa</div> <div>M.Hayakawa</div> </div> <div> <div>Y.Hattori</div> <div>K.Takahashi</div> </div> |     |      |       |      |                                              |            |                          |        |                         |              |                              |  |  |  |
| Step                                                                                                                                                                             | Fab | Move | Store | Insp | Operation description                        | Item #     | Product Characteristics  | Item # | Control Characteristics |              |                              |  |  |  |
|                                                                                                                                                                                  | ◆   | ●    | ▲     | ■    |                                              |            |                          |        |                         |              |                              |  |  |  |
| 1                                                                                                                                                                                | ◆   | ●    |       | ■    | Receipt of material and receiving inspection | 1          | Product name             | 1      | Material ledger         |              |                              |  |  |  |
|                                                                                                                                                                                  |     |      |       |      |                                              | 2          | Quantity                 | 2      | ↑                       |              |                              |  |  |  |
|                                                                                                                                                                                  |     |      |       |      |                                              | 3          | Condition of packing     | 3      | ↑                       |              |                              |  |  |  |
|                                                                                                                                                                                  |     |      |       |      |                                              | 4          | Material characteristics | 4      | Inspection report       |              |                              |  |  |  |
| 2                                                                                                                                                                                | ◆   |      |       |      | Try of stamping                              | 1          | Machine check            | 1      | Daily report            |              |                              |  |  |  |
|                                                                                                                                                                                  |     |      |       |      |                                              | 2          | product condition        | 2      | ↑                       |              |                              |  |  |  |
| 3                                                                                                                                                                                |     |      |       | ■    | Initial inspection                           | 1          | Dimension                | 1      | Inspection report       |              |                              |  |  |  |
|                                                                                                                                                                                  |     |      |       |      |                                              | 2          | Appearance               | 2      | ↑                       |              |                              |  |  |  |
|                                                                                                                                                                                  |     |      |       |      |                                              | 3          | function                 | 3      | ↑                       |              |                              |  |  |  |
| 4                                                                                                                                                                                | ◆   |      |       |      | Stamping                                     | 1          | Quantity                 | 1      | Daily report            |              |                              |  |  |  |
| 5                                                                                                                                                                                |     |      |       | ■    | Final inspection                             | 1          | Dimension                | 1      | Inspection report       |              |                              |  |  |  |
|                                                                                                                                                                                  |     |      |       |      |                                              | 2          | Appearance               | 2      | ↑                       |              |                              |  |  |  |
|                                                                                                                                                                                  |     |      |       |      |                                              | 3          | function                 | 3      | ↑                       |              |                              |  |  |  |
| 6                                                                                                                                                                                | ◆   | ●    |       |      | Packing                                      | 1          | part name and code       | 1      | Daily report            |              |                              |  |  |  |
|                                                                                                                                                                                  |     |      |       |      |                                              | 2          | Quantity                 | 2      | ↑                       |              |                              |  |  |  |
| 7                                                                                                                                                                                |     |      | ▲     |      | Shipment                                     | 1          | Part name and code       | 1      | Inventory book          |              |                              |  |  |  |
|                                                                                                                                                                                  |     |      |       |      |                                              | 2          | Quantity                 | 2      | ↑                       |              |                              |  |  |  |
|                                                                                                                                                                                  |     |      |       |      |                                              | 3          | Shipping destination     | 3      | ↑                       |              |                              |  |  |  |

Supplier

POTENTIAL FAILURE MODE AND EFFECTS ANALYSIS

Sumitomo Wiring Systems, Ltd.

Part Certification

☐ Design FMEA
 ☒ Process FMEA

☐ System
 ☐ Subsystem
 ☒ Component

Page 1 of 15

FMEA Number PPAP S14-083

Part Number 8240-0509

Model Year(s) / Vehicle(s) N/A

Design or Process Responsibility Sumitomo Wiring Systems, Ltd.

Key Date N/A

Prepared by Sumitomo Wiring Systems, Ltd.

Original FMEA Date 17.Nov.'14

Telephone # 81-59-382-8867

FMEA Revision Date N/A

Core Team

Design section (T.Hata)

QA section (M.Hayakawa)

Engineering section (D.Hirasawa)

Production section (T. Nakazawa)

| Design Item or Process Function Requirements | Potential Failure Mode              | Potential Effect(s) of Failure | Severity | Class | Potential Cause(s) / Mechanism(s) of Failure | Occurrence | Current Design or Process Controls                          | Det | RPN | Recommended Actions | Responsibility & Target Completion Date | Actions Taken | Severity | Occurrence | Det | RPN |
|----------------------------------------------|-------------------------------------|--------------------------------|----------|-------|----------------------------------------------|------------|-------------------------------------------------------------|-----|-----|---------------------|-----------------------------------------|---------------|----------|------------|-----|-----|
| Receipt of material and receiving inspection | Wrong raw material                  | Lower its Function/Durability  | 8        | N/A   | Misshipment of supplier                      | 1          | Confirmation of Warrant and Label                           | 2   | 16  | N/A                 | N/A                                     | N/A           | N/A      | N/A        | N/A | N/A |
|                                              |                                     | Lower its Function/Durability  | 7        | ↑     | Misoperation                                 | 1          | Confirmation of Warrant and product                         | 2   | 14  | ↑                   | ↑                                       | ↑             | ↑        | ↑          | ↑   | ↑   |
| Try of stamping                              | Dimensional problem and deformation | Lower its Function/Durability  | 8        | ↑     | Missetting of Die                            | 1          | According to operation manual<br>Inspection of product      | 2   | 16  | N/A                 | N/A                                     | N/A           | N/A      | N/A        | N/A | N/A |
|                                              |                                     | Lower its Function/Durability  | 8        | ↑     | Missetting of condition                      | 1          | According to operation manual<br>Inspection of product      | 2   | 16  | ↑                   | ↑                                       | ↑             | ↑        | ↑          | ↑   | ↑   |
| Initial inspection                           | Dimensional problem and deformation | Lower its Function/Durability  | 6        | ↑     | Fail to check the appearance difference      | 1          | According to inspection manual                              | 2   | 12  | N/A                 | N/A                                     | N/A           | N/A      | N/A        | N/A | N/A |
|                                              |                                     | Lower its Function/Durability  | 6        | ↑     | Mismeasuring                                 | 1          | According to inspection manual                              | 2   | 12  | ↑                   | ↑                                       | ↑             | ↑        | ↑          | ↑   | ↑   |
|                                              |                                     | Lower its Function/Durability  | 6        | ↑     | Breakdown of measuring machine               | 1          | Daily check<br>Periodical check                             | 1   | 6   | ↑                   | ↑                                       | ↑             | ↑        | ↑          | ↑   | ↑   |
| Stamping                                     | Dimensional problem and deformation | Lower its Function/Durability  | 6        | ↑     | Not good stamping condition                  | 1          | According to operation manual<br>Inspection of product      | 2   | 12  | N/A                 | N/A                                     | N/A           | N/A      | N/A        | N/A | N/A |
|                                              |                                     | Lower its Function/Durability  | 6        | ↑     | Back-off of cutting pieces                   | 1          | Visual check<br>Control of bottom dead point                | 1   | 6   | ↑                   | ↑                                       | ↑             | ↑        | ↑          | ↑   | ↑   |
|                                              |                                     | Lower its Function/Durability  | 6        | ↑     | Broken die                                   | 1          | Confirmation of check sheet of die<br>Inspection of product | 2   | 12  | ↑                   | ↑                                       | ↑             | ↑        | ↑          | ↑   | ↑   |

Supplier

POTENTIAL FAILURE MODE AND EFFECTS ANALYSIS

Sumitomo Wiring Systems, Ltd.

Part Certification

☐ Design FMEA
 ☒ Process FMEA

☐ System
 ☐ Subsystem
 ☒ Component

Page

2 of 15

FMEA Number

PPAP S14-083

Part Number

8240-0509

Design or Process Responsibility

Sumitomo Wiring Systems, Ltd.

Prepared by

Sumitomo Wiring Systems, Ltd.

Telephone #

81-59-382-8867

Model Year(s) / Vehicle(s)

N/A

Key Date

N/A

Original FMEA Date

17.Nov.'14

FMEA Revision Date

N/A

Core Team

Design section (T.Hata)

Engineering section (D.Hirasawa)

QA section (M.Hayakawa)

Production section (T. Nakazawa)

| Design Item or<br>Process Function<br>Requirements | Potential Failure<br>Mode              | Potential Effect(s) of<br>Failure | S<br>e<br>v | C<br>l<br>a<br>s<br>s | Potential Cause(s) /<br>Mechanism(s) of Failure | O<br>c<br>c | Current Design or Process Controls        | D<br>e<br>t | R<br>P<br>N | Recommended Actions | Responsibility &<br>Target Completion<br>Date | Actions Taken | S<br>e<br>v | O<br>c<br>c | D<br>e<br>t | R<br>P<br>N |
|----------------------------------------------------|----------------------------------------|-----------------------------------|-------------|-----------------------|-------------------------------------------------|-------------|-------------------------------------------|-------------|-------------|---------------------|-----------------------------------------------|---------------|-------------|-------------|-------------|-------------|
| Final inspection                                   | Dimensional problem<br>and deformation | Lower its<br>Function/Durability  | 6           | N/A                   | Fail to check the<br>appearance difference      | 1           | According to inspection manual            | 2           | 12          | N/A                 | N/A                                           | N/A           | N/A         | N/A         | N/A         | N/A         |
|                                                    |                                        | Lower its<br>Function/Durability  | 6           | ↑                     | Mismeasuring                                    | 1           | According to inspection manual            | 2           | 12          | ↑                   | ↑                                             | ↑             | ↑           | ↑           | ↑           | ↑           |
|                                                    |                                        | Lower its<br>Function/Durability  | 6           | ↑                     | Breakdown of measuring<br>machine               | 1           | Daily check<br>Periodical check           | 1           | 6           | ↑                   | ↑                                             | ↑             | ↑           | ↑           | ↑           | ↑           |
| Packing and<br>Shipment                            | Wrong quantity                         | N/A                               | 2           | ↑                     | Miss confirmation of the<br>quantity            | 1           | According to the packing<br>specification | 1           | 2           | N/A                 | N/A                                           | N/A           | N/A         | N/A         | N/A         | N/A         |
|                                                    | Miss shipment                          | N/A                               | 2           | ↑                     | Miss labeling                                   | 1           | According to the packing<br>specification | 1           | 2           | ↑                   | ↑                                             | ↑             | ↑           | ↑           | ↑           | ↑           |
|                                                    | Broken package                         | ↑                                 | 1           | ↑                     | Mishandling                                     | 1           | According to shipping manual              | 2           | 2           | ↑                   | ↑                                             | ↑             | ↑           | ↑           | ↑           | ↑           |

Supplier

Sumitomo Wiring Systems, Ltd.

Part Certification

## CONTROL PLAN

|                                                                                                                                       |                      |                                              |  |                                                 |                 |                        |
|---------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------------------------------|--|-------------------------------------------------|-----------------|------------------------|
| Control Plan Category<br><input type="radio"/> Prototype <input type="radio"/> Pre-Launch <input checked="" type="radio"/> Production |                      | Key Contact Name<br>Masahiro.Hayakawa        |  | Date (Orig)<br>17.Nov.'14                       | Date (Rev)<br>0 | Page<br>1 of 15        |
| Control Plan Number<br>PPAP S14-083                                                                                                   |                      | Key Contact Phone<br>81-59-382-8867          |  | Customer Engineering Approval (If Req'd)<br>N/A |                 | Date (If Req'd)<br>N/A |
| Part Number<br>8240-0509                                                                                                              | ECL<br>3             | Supplier / Plant Approval / Date<br>N/A      |  | Customer Quality Approval (If Req'd)<br>N/A     |                 | Date (If Req'd)<br>N/A |
| Part Name / Description<br>TER-WUS120FSSN                                                                                             |                      | Other supplier approval by (If Req'd)<br>N/A |  | Other Approval (If Req'd)<br>N/A                |                 | Date (If req'd)<br>N/A |
| Supplier / Plant<br>Sumitomo Wiring Systems,Ltd.                                                                                      | Supplier Code<br>N/A | Other Approval Date (If Req'd)<br>N/A        |  |                                                 |                 |                        |

Core team Members

Engineer Section D.Hirasawa Y.Hattori  
 QA Section M.Hayakawa K.Takahashi

| Part /<br>Proc # | Process Name /<br>Operation description | Machine, Device, Jig,<br>Tools For Mfg. | Characteristics |                             |                   | Special Char.<br>Class. | Methods                                           |                                        |                                            |                 |                      | Reaction Plan               |
|------------------|-----------------------------------------|-----------------------------------------|-----------------|-----------------------------|-------------------|-------------------------|---------------------------------------------------|----------------------------------------|--------------------------------------------|-----------------|----------------------|-----------------------------|
|                  |                                         |                                         | No.             | Product                     | Process           |                         | Product /<br>Process Specification /<br>Tolerance | Evaluation / Measurement<br>Technique  | Sample<br>Size                             | Sample<br>Freq. | Control Method       |                             |
| 1                | Receipt of<br>material and<br>receiving | N/A                                     | 1               | Product name                | N/A               | N/A                     | N/A                                               | Check of slip                          | N/A                                        | Lot             | Material ledger      | Get in touch<br>with leader |
|                  |                                         | ↑                                       | 2               | Quantity                    | ↑                 | ↑                       | ↑                                                 | Check of delivery<br>slip              | ↑                                          | ↑               | ↑                    |                             |
|                  |                                         | ↑                                       | 3               | Condition of<br>packing     | ↑                 | ↑                       | ↑                                                 | Visual check                           | ↑                                          | ↑               | ↑                    |                             |
|                  |                                         | ↑                                       | 4               | Material<br>characteristics | ↑                 | ↑                       | ↑                                                 | Check of material<br>inspection report | ↑                                          | ↑               | Inspection<br>report |                             |
| 2                | Try of stamping                         | Press machine                           | 1               | N/A                         | Machine check     | N/A                     | Operation                                         | Machine check                          | N/A                                        | Lot             | Daily report         |                             |
|                  |                                         | ↑                                       | 2               | ↑                           | product condition | ↑                       | ↑                                                 | Daily report check                     | ↑                                          | ↑               | ↑                    |                             |
| 3                | Initial inspection                      | Measuring<br>instrument                 | 1               | Dimension                   | N/A               | N/A                     | Inspection<br>standard                            | Dimension data<br>check                | Depend on<br>the<br>inspection<br>Standard |                 | Inspection<br>report |                             |
|                  |                                         | Magnifying glass                        | 2               | Appearance                  | ↑                 | ↑                       | ↑                                                 | Visual check                           |                                            |                 | ↑                    |                             |
|                  |                                         | Measuring<br>machine                    | 3               | function                    | ↑                 | ↑                       | ↑                                                 | Function data<br>check                 |                                            |                 | ↑                    |                             |
| 4                | Stamping                                | Press machine                           | 1               | N/A                         | Quantity          | N/A                     | Operation<br>standard                             | Check of preset<br>counter             | N/A                                        | Lot             | Daily report         |                             |

Supplier

|                               |
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| Sumitomo Wiring Systems, Ltd. |
|-------------------------------|

Part Certification

## CONTROL PLAN

|                   |            |             |  |
|-------------------|------------|-------------|--|
| Core team Members |            |             |  |
| Engineer Section  | D.Hirasawa | Y.Hattori   |  |
| QA Section        | M.Hayakawa | K.Takahashi |  |

| Part /<br>Proc # | Process Name /<br>Operation description | Machine, Device, Jig,<br>Tools For Mfg. | Characteristics |                      |         | Special Char.<br><br>Class. | Methods                                           |                                           |                                   |                     |                   | Reaction Plan            |
|------------------|-----------------------------------------|-----------------------------------------|-----------------|----------------------|---------|-----------------------------|---------------------------------------------------|-------------------------------------------|-----------------------------------|---------------------|-------------------|--------------------------|
|                  |                                         |                                         | No.             | Product              | Process |                             | Product /<br>Process Specification /<br>Tolerance | Evaluation / Measurement<br><br>Technique | Sample<br><br>Size                | Sample<br><br>Freq. | Control Method    |                          |
| 5                | Final inspection                        | Measuring instrument                    | 1               | Dimension            | ↑       | ↑                           | Inspection standard                               | Dimension data check                      | Depend on the inspection Standard |                     | Inspection report | Get in touch with leader |
|                  |                                         | Magnifying glass                        | 2               | Appearance           | ↑       | ↑                           | ↑                                                 | Visual check                              |                                   |                     | ↑                 |                          |
|                  |                                         | Measuring machine                       | 3               | function             | ↑       | ↑                           | ↑                                                 | Function data check                       |                                   |                     | ↑                 |                          |
| 6                | Packing                                 | N/A                                     | 1               | part name and code   | N/A     | N/A                         | Operation standard                                | Visual check                              | All                               | Lot                 | Daily report      |                          |
|                  |                                         | ↑                                       | 2               | Quantity             | ↑       | ↑                           | ↑                                                 | ↑                                         | ↑                                 | ↑                   | ↑                 |                          |
| 7                | Shipment                                | ↑                                       | 1               | Part name and code   | N/A     | N/A                         | Shipping instruction sheet                        | Visual check                              | All                               | Lot                 | Inventory book    |                          |
|                  |                                         | ↑                                       | 2               | Quantity             | ↑       | ↑                           | ↑                                                 | ↑                                         | ↑                                 | ↑                   | ↑                 |                          |
|                  |                                         | ↑                                       | 3               | Shipping destination | ↑       | ↑                           | ↑                                                 | ↑                                         | ↑                                 | ↑                   | ↑                 |                          |

Katsunuki Ota

Gage Repeatability and Reproducibility Data Sheet (Calipers)

| Appraiser / Trial # |                                                  | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | AVERAGE       |        |
|---------------------|--------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|--------|
| 1 A                 | 1                                                | 9.40  | 9.45  | 9.42  | 9.39  | 9.43  | 9.38  | 9.35  | 9.41  | 9.42  | 9.40  | 9.4050        |        |
|                     | 2                                                | 9.41  | 9.44  | 9.43  | 9.38  | 9.43  | 9.38  | 9.36  | 9.41  | 9.42  | 9.41  | 9.4070        |        |
|                     | 3                                                | 9.41  | 9.44  | 9.43  | 9.38  | 9.42  | 9.38  | 9.36  | 9.42  | 9.41  | 9.41  | 9.4060        |        |
|                     | Avarage                                          | 9.407 | 9.443 | 9.427 | 9.383 | 9.427 | 9.380 | 9.357 | 9.413 | 9.417 | 9.407 | Xbar A 9.4060 |        |
|                     | Range                                            | 0.010 | 0.010 | 0.010 | 0.010 | 0.010 | 0.000 | 0.010 | 0.010 | 0.010 | 0.010 | Rbar A 0.0090 |        |
| 6 B                 | 1                                                | 9.38  | 9.42  | 9.36  | 9.40  | 9.45  | 9.42  | 9.38  | 9.41  | 9.42  | 9.41  | 9.4050        |        |
|                     | 2                                                | 9.38  | 9.42  | 9.37  | 9.41  | 9.45  | 9.41  | 9.38  | 9.41  | 9.43  | 9.40  | 9.4060        |        |
|                     | 3                                                | 9.39  | 9.41  | 9.37  | 9.41  | 9.44  | 9.41  | 9.38  | 9.41  | 9.42  | 9.41  | 9.4050        |        |
|                     | Avarage                                          | 9.383 | 9.417 | 9.367 | 9.407 | 9.447 | 9.413 | 9.380 | 9.410 | 9.423 | 9.40  | Xbar B 9.4053 |        |
|                     | Range                                            | 0.010 | 0.010 | 0.010 | 0.010 | 0.010 | 0.010 | 0.000 | 0.000 | 0.010 | 0.010 | Rbar B 0.0080 |        |
| 11 C                | 1                                                | 9.40  | 9.42  | 9.44  | 9.43  | 9.39  | 9.41  | 9.36  | 9.41  | 9.37  | 9.39  | 9.4020        |        |
|                     | 2                                                | 9.41  | 9.42  | 9.45  | 9.44  | 9.40  | 9.40  | 9.36  | 9.41  | 9.37  | 9.39  | 9.4050        |        |
|                     | 3                                                | 9.40  | 9.42  | 9.44  | 9.42  | 9.39  | 9.41  | 9.37  | 9.40  | 9.38  | 9.39  | 9.4020        |        |
|                     | Avarage                                          | 9.403 | 9.420 | 9.443 | 9.430 | 9.393 | 9.407 | 9.363 | 9.407 | 9.373 | 9.390 | Xbar C 9.4030 |        |
|                     | Range                                            | 0.010 | 0.000 | 0.010 | 0.020 | 0.010 | 0.010 | 0.010 | 0.010 | 0.010 | 0.000 | Rbar C 0.0090 |        |
| 16 Part             |                                                  |       |       |       |       |       |       |       |       |       |       | Xbar-bar      | 9.4048 |
| Avarage (X p)       |                                                  | 9.398 | 9.427 | 9.412 | 9.407 | 9.422 | 9.400 | 9.367 | 9.410 | 9.404 | 9.401 | R p           | 0.0600 |
| 17                  | (Rbar A + Rbar B + Rbar C)/(# of Appraisers = 3) |       |       |       |       |       |       |       |       |       |       | Rbar-bar      | 0.0087 |
| 18                  | (Max Xbar)-(Min Xbar) = Xbar DIFF                |       |       |       |       |       |       |       |       |       |       |               | 0.0030 |
| 19                  | (R bar-bar)*(D4=2.58)=UCL R                      |       |       |       |       |       |       |       |       |       |       |               | 0.02   |
| 20                  | (R bar-bar)*(D3=0.00)=LCL R                      |       |       |       |       |       |       |       |       |       |       |               | 0.00   |

| Gage Repeatability and Reproducibility Report                                                                |                                        |  |            |                                  |              | Date 31. MAR. '16 |                                                                 |
|--------------------------------------------------------------------------------------------------------------|----------------------------------------|--|------------|----------------------------------|--------------|-------------------|-----------------------------------------------------------------|
| Part No. and Name                                                                                            | Measurement sample<br>for Gage R&R use |  | Gage Name  | Calipers                         | Performed by |                   |                                                                 |
| Characteristics                                                                                              | Dimension                              |  | Gage No.   | 817                              | T. Morishita |                   |                                                                 |
| Tolerance                                                                                                    | 0.6 Units mm                           |  | Gage Type  | Calipers                         | T. Saitou    |                   |                                                                 |
| Tolerance (T)                                                                                                | T= 0.6                                 |  |            |                                  | T. Taniguchi |                   |                                                                 |
| From data sheet                                                                                              | Rbar-bar= 0.0087                       |  | Xbar DIFF= | 0.0030                           | R p=         | 0.060             |                                                                 |
| Measurement Unit Analysis                                                                                    |                                        |  |            | Based on the TOLERANCE Method    |              |                   |                                                                 |
| <b>Repeatability - Equipment Variation (EV)</b><br>EV = Rbar-bar * K1<br>= 0.0051                            |                                        |  |            | Trials                           |              | K1                |                                                                 |
|                                                                                                              |                                        |  |            | 2                                |              | 0.8862            |                                                                 |
|                                                                                                              |                                        |  |            | 3                                |              | 0.5908            |                                                                 |
| <b>Reproducibility - Appraiser Variation (AV)</b><br>AV= SQRT((Xbar DIFF * K2)^2 - ( EV^2/nr))<br>= 0.001260 |                                        |  |            | % AV= (AV*6/T) * 100<br>= 1.26 % |              |                   |                                                                 |
|                                                                                                              |                                        |  |            | Appraisers                       |              | 2                 | 3                                                               |
|                                                                                                              |                                        |  |            | K2                               |              | 0.7071            | 0.5231                                                          |
| <b>Repeatability &amp; Reproducibility (R&amp;R)</b><br>R&R= SQRT(EV^2 + AV^2)<br>= 0.0053                   |                                        |  |            | Parts                            |              | K3                | % R&R= (R&R*6/T) * 100<br>= 5.27 %<br>Gage system OK            |
| <b>Part Variation (PV)</b><br>PV= R p * K3<br>= 0.0189                                                       |                                        |  |            | 2                                |              | 0.7071            | % PV= (PV*6/T) * 100<br>= 18.88 %                               |
|                                                                                                              |                                        |  |            | 3                                |              | 0.5231            |                                                                 |
|                                                                                                              |                                        |  |            | 4                                |              | 0.4467            |                                                                 |
|                                                                                                              |                                        |  |            | 5                                |              | 0.4030            |                                                                 |
| <b>Total Variation (TV)</b><br>TV= SQRT (R&R^2 + PV^2)<br>= 0.0196                                           |                                        |  |            | 6                                |              | 0.3742            | ndc= 1.41 (PV/GRR)<br>= 5<br><br>Gage discrimination acceptable |
|                                                                                                              |                                        |  |            | 7                                |              | 0.3534            |                                                                 |
|                                                                                                              |                                        |  |            | 8                                |              | 0.3375            |                                                                 |
|                                                                                                              |                                        |  |            | 9                                |              | 0.3249            |                                                                 |
|                                                                                                              |                                        |  |            | 10                               |              | 0.3146            |                                                                 |

Katsunuki Ota

Gage Repeatability and Reproducibility Data Sheet (Projector)

| Appraiser / Trial # |                                                  | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | AVERAGE  |        |
|---------------------|--------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|--------|
| 1 A                 | 1                                                | 9.40  | 9.45  | 9.40  | 9.41  | 9.41  | 9.39  | 9.40  | 9.36  | 9.40  | 9.40  | 9.4020   |        |
| 2                   | 2                                                | 9.41  | 9.44  | 9.41  | 9.41  | 9.41  | 9.39  | 9.40  | 9.36  | 9.41  | 9.41  | 9.4050   |        |
| 3                   | 3                                                | 9.40  | 9.44  | 9.41  | 9.39  | 9.42  | 9.40  | 9.40  | 9.37  | 9.42  | 9.41  | 9.4060   |        |
| 4                   | Avarage                                          | 9.403 | 9.443 | 9.407 | 9.403 | 9.413 | 9.393 | 9.400 | 9.363 | 9.410 | 9.407 | Xbar A   | 9.4043 |
| 5                   | Range                                            | 0.010 | 0.010 | 0.010 | 0.020 | 0.010 | 0.010 | 0.000 | 0.010 | 0.020 | 0.010 | Rbar A   | 0.0110 |
| 6 B                 | 1                                                | 9.42  | 9.44  | 9.38  | 9.41  | 9.42  | 9.40  | 9.41  | 9.35  | 9.39  | 9.38  | 9.4000   |        |
| 7                   | 2                                                | 9.42  | 9.43  | 9.39  | 9.41  | 9.41  | 9.40  | 9.41  | 9.36  | 9.39  | 9.39  | 9.4010   |        |
| 8                   | 3                                                | 9.42  | 9.44  | 9.40  | 9.41  | 9.41  | 9.40  | 9.41  | 9.35  | 9.40  | 9.39  | 9.4030   |        |
| 9                   | Avarage                                          | 9.420 | 9.437 | 9.390 | 9.410 | 9.413 | 9.400 | 9.410 | 9.353 | 9.393 | 9.387 | Xbar B   | 9.4013 |
| 10                  | Range                                            | 0.000 | 0.010 | 0.020 | 0.000 | 0.010 | 0.000 | 0.000 | 0.010 | 0.010 | 0.010 | Rbar B   | 0.0070 |
| 11 C                | 1                                                | 9.41  | 9.45  | 9.40  | 9.41  | 9.42  | 9.41  | 9.41  | 9.36  | 9.40  | 9.39  | 9.4060   |        |
| 12                  | 2                                                | 9.42  | 9.45  | 9.41  | 9.42  | 9.42  | 9.40  | 9.42  | 9.35  | 9.41  | 9.40  | 9.4100   |        |
| 13                  | 3                                                | 9.41  | 9.44  | 9.41  | 9.41  | 9.42  | 9.42  | 9.41  | 9.35  | 9.40  | 9.39  | 9.4060   |        |
| 14                  | Avarage                                          | 9.413 | 9.447 | 9.407 | 9.413 | 9.420 | 9.410 | 9.413 | 9.353 | 9.403 | 9.393 | Xbar C   | 9.4073 |
| 15                  | Range                                            | 0.010 | 0.010 | 0.010 | 0.010 | 0.000 | 0.020 | 0.010 | 0.010 | 0.010 | 0.010 | Rbar C   | 0.0100 |
| 16 Part             |                                                  |       |       |       |       |       |       |       |       |       |       | Xbar-bar | 9.4043 |
| Avarage (X p)       |                                                  | 9.412 | 9.442 | 9.401 | 9.409 | 9.416 | 9.401 | 9.408 | 9.357 | 9.402 | 9.396 | R p      | 0.0856 |
| 17                  | (Rbar A + Rbar B + Rbar C)/(# of Appraisers = 3) |       |       |       |       |       |       |       |       |       |       | Rbar-bar | 0.0093 |
| 18                  | (Max Xbar)-(Min Xbar) = Xbar DIFF                |       |       |       |       |       |       |       |       |       |       |          | 0.0060 |
| 19                  | (R bar-bar)*(D4=2.58)=UCL R                      |       |       |       |       |       |       |       |       |       |       |          | 0.02   |
| 20                  | (R bar-bar)*(D3=0.00)=LCL R                      |       |       |       |       |       |       |       |       |       |       |          | 0.00   |

| Gage Repeatability and Reproducibility Report        |                                     |                   |               |                                                             | Date 31. MAR. '16 |
|------------------------------------------------------|-------------------------------------|-------------------|---------------|-------------------------------------------------------------|-------------------|
| Part No. and Name                                    | Measurement sample for Gage R&R use | Gage Name         | Projector     |                                                             | Performed by      |
| Characteristics                                      | Dimension                           | Gage No.          | T0026         |                                                             | T. Morishita      |
| Tolerance                                            | 0.6 Units mm                        | Gage Type         | Projector:V24 |                                                             | T. Saitou         |
| Tolerance (T)                                        | T= 0.6                              |                   |               |                                                             | T. Taniguchi      |
| From data sheet                                      | Rbar-bar= 0.0093                    | Xbar DIFF= 0.0060 | R p= 0.086    |                                                             |                   |
| Measurement Unit Analysis                            |                                     |                   |               | Based on the TOLERANCE Method                               |                   |
| <b>Repeatability - Equipment Variation (EV)</b>      |                                     |                   |               | % EV= (EV*6/T) * 100<br>= 5.51 %                            |                   |
| EV = Rbar-bar * K1<br>= 0.0055                       |                                     | Trials            | K1            |                                                             |                   |
|                                                      |                                     | 2                 | 0.8862        |                                                             |                   |
|                                                      |                                     | 3                 | 0.5908        |                                                             |                   |
| <b>Reproducibility - Appraiser Variation (AV)</b>    |                                     |                   |               | % AV= (AV*6/T) * 100<br>= 2.97 %                            |                   |
| AV= SQRT((Xbar DIFF * K2)^2 - (EV^2/nr))<br>= 0.0030 |                                     |                   |               | n = number of parts<br>r = number of trials                 |                   |
|                                                      |                                     | Appraisers        | 2             |                                                             |                   |
|                                                      |                                     | K2                | 0.7071        |                                                             |                   |
|                                                      |                                     |                   | 3             |                                                             |                   |
|                                                      |                                     | K2                | 0.5231        |                                                             |                   |
| <b>Repeatability &amp; Reproducibility (R&amp;R)</b> |                                     |                   |               | % R&R= (R&R*6/T) * 100<br>= 6.26 %<br>Gage system OK        |                   |
| R&R= SQRT(EV^2 + AV^2)<br>= 0.0063                   |                                     | Parts             | K3            | % PV= (PV*6/T) * 100<br>= 26.92 %                           |                   |
| <b>Part Variation (PV)</b>                           |                                     | 2                 | 0.7071        |                                                             |                   |
| PV= R p * K3<br>= 0.0269                             |                                     | 3                 | 0.5231        |                                                             |                   |
|                                                      |                                     | 4                 | 0.4467        |                                                             |                   |
|                                                      |                                     | 5                 | 0.4030        |                                                             |                   |
| <b>Total Variation (TV)</b>                          |                                     | 6                 | 0.3742        | ndc= 1.41 (PV/GRR)<br>= 6<br>Gage discrimination acceptable |                   |
| TV= SQRT(R&R^2 + PV^2)<br>= 0.0276                   |                                     | 7                 | 0.3534        |                                                             |                   |
|                                                      |                                     | 8                 | 0.3375        |                                                             |                   |
|                                                      |                                     | 9                 | 0.3249        |                                                             |                   |
|                                                      |                                     | 10                | 0.3146        |                                                             |                   |

## PART INSPECTION REPORT

Supplier

1 of 1

SUMITOMO WIRING SYSTEMS

Part Certification

Mold:SZ1

|             |           |     |   |           |                |
|-------------|-----------|-----|---|-----------|----------------|
| Part Number | 8240-0509 | ECL | 3 | Part Name | TER-WUS120FSSN |
|-------------|-----------|-----|---|-----------|----------------|

| Dim<br>No | Figure<br>Code | Drawing<br>Dimension | Acceptance |       | PARTS/TOOL CAVITIES CHECKED |   |   |   |   |   |   |   | OK | NOT<br>OK |  |
|-----------|----------------|----------------------|------------|-------|-----------------------------|---|---|---|---|---|---|---|----|-----------|--|
|           |                |                      | Lower      | Upper | 1                           | 2 | 3 | 4 | 5 | 6 | 7 | 8 |    |           |  |
| 1         |                | 2.55                 | 2.35       | 2.75  | 2.55                        |   |   |   |   |   |   |   | 0  |           |  |
| 2         |                | 2                    | 1.8        | 2.2   | 1.97                        |   |   |   |   |   |   |   | 0  |           |  |
| 3         |                | 18                   | 17.7       | 18.3  | 18.11                       |   |   |   |   |   |   |   | 0  |           |  |
| 4         |                | 3.75                 | 3.55       | 3.95  | 3.80                        |   |   |   |   |   |   |   | 0  |           |  |
| 5         |                | 2                    | 1.8        | 2.2   | 2.00                        |   |   |   |   |   |   |   | 0  |           |  |
| 6         |                | 0.75                 | 0.55       | 0.95  | 0.75                        |   |   |   |   |   |   |   | 0  |           |  |
| 7         |                | 2.6                  | 2.3        | 2.9   | 2.55                        |   |   |   |   |   |   |   | 0  |           |  |
| 8         |                | 2.2                  | Ref        |       | 2.18                        |   |   |   |   |   |   |   | -  |           |  |
| 9         |                | 4.3                  | 4.0        | 4.6   | 4.22                        |   |   |   |   |   |   |   | 0  |           |  |
| 10        |                | 3.4                  | Ref        |       | 3.30                        |   |   |   |   |   |   |   | -  |           |  |
| 11        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 12        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 13        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 14        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 15        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 16        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 17        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 18        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 19        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 20        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 21        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 22        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 23        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 24        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 25        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 26        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 27        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 28        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 29        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 30        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 31        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 32        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 33        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 34        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 35        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 36        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 37        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 38        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 39        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 40        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 41        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 42        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 43        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 44        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 45        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |

Inspection Source Company Name

|                     |                  |       |                                               |                        |            |
|---------------------|------------------|-------|-----------------------------------------------|------------------------|------------|
| Inspected by        | <i>Y.Hattori</i> | Title | QA STAFF                                      | Inspection Report Date | 31.Jan.'17 |
| Inspctor Supervisor |                  | Title |                                               | Date                   |            |
| Approved by         | <i>K.Ota</i>     | Title | Components Gr. QA Dep. Deputy General Manager | Date                   | 31.Jan.'17 |

## PART INSPECTION REPORT

Supplier

1 of 1

SUMITOMO WIRING SYSTEMS

Part Certification

Mold:SZ2

|             |           |     |   |           |                |
|-------------|-----------|-----|---|-----------|----------------|
| Part Number | 8240-0509 | ECL | 3 | Part Name | TER-WUS120FSSN |
|-------------|-----------|-----|---|-----------|----------------|

| Dim<br>No | Figure<br>Code | Drawing<br>Dimension | Acceptance |       | PARTS/TOOL CAVITIES CHECKED |   |   |   |   |   |   |   | OK | NOT<br>OK |  |
|-----------|----------------|----------------------|------------|-------|-----------------------------|---|---|---|---|---|---|---|----|-----------|--|
|           |                |                      | Lower      | Upper | 1                           | 2 | 3 | 4 | 5 | 6 | 7 | 8 |    |           |  |
| 1         |                | 2.55                 | 2.35       | 2.75  | 2.52                        |   |   |   |   |   |   |   | 0  |           |  |
| 2         |                | 2                    | 1.8        | 2.2   | 2.00                        |   |   |   |   |   |   |   | 0  |           |  |
| 3         |                | 18                   | 17.7       | 18.3  | 18.16                       |   |   |   |   |   |   |   | 0  |           |  |
| 4         |                | 3.75                 | 3.55       | 3.95  | 3.74                        |   |   |   |   |   |   |   | 0  |           |  |
| 5         |                | 2                    | 1.8        | 2.2   | 2.03                        |   |   |   |   |   |   |   | 0  |           |  |
| 6         |                | 0.75                 | 0.55       | 0.95  | 0.68                        |   |   |   |   |   |   |   | 0  |           |  |
| 7         |                | 2.6                  | 2.3        | 2.9   | 2.68                        |   |   |   |   |   |   |   | 0  |           |  |
| 8         |                | 2.2                  | Ref        |       | 2.15                        |   |   |   |   |   |   |   | -  |           |  |
| 9         |                | 4.3                  | 4.0        | 4.6   | 4.21                        |   |   |   |   |   |   |   | 0  |           |  |
| 10        |                | 3.4                  | Ref        |       | 3.33                        |   |   |   |   |   |   |   | -  |           |  |
| 11        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 12        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 13        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 14        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 15        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 16        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 17        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 18        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 19        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 20        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 21        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 22        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 23        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 24        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 25        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 26        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 27        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 28        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 29        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 30        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 31        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 32        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 33        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 34        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 35        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 36        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 37        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 38        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 39        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 40        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 41        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 42        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 43        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 44        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 45        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |

Inspection Source Company Name

|                     |                  |       |                                               |                        |            |
|---------------------|------------------|-------|-----------------------------------------------|------------------------|------------|
| Inspected by        | <i>Y.Hattori</i> | Title | QA STAFF                                      | Inspection Report Date | 31.Jan.'17 |
| Inspctor Supervisor |                  | Title |                                               | Date                   |            |
| Approved by         | <i>K.Ota</i>     | Title | Components Gr. QA Dep. Deputy General Manager | Date                   | 31.Jan.'17 |

## PART INSPECTION REPORT

Supplier

1 of 1

SUMITOMO WIRING SYSTEMS

Part Certification

Mold:SZ3

|             |           |     |   |           |                |
|-------------|-----------|-----|---|-----------|----------------|
| Part Number | 8240-0509 | ECL | 3 | Part Name | TER-WUS120FSSN |
|-------------|-----------|-----|---|-----------|----------------|

| Dim<br>No | Figure<br>Code | Drawing<br>Dimension | Acceptance |       | PARTS/TOOL CAVITIES CHECKED |   |   |   |   |   |   |   | OK | NOT<br>OK |  |
|-----------|----------------|----------------------|------------|-------|-----------------------------|---|---|---|---|---|---|---|----|-----------|--|
|           |                |                      | Lower      | Upper | 1                           | 2 | 3 | 4 | 5 | 6 | 7 | 8 |    |           |  |
| 1         |                | 2.55                 | 2.35       | 2.75  | 2.53                        |   |   |   |   |   |   |   | 0  |           |  |
| 2         |                | 2                    | 1.8        | 2.2   | 1.99                        |   |   |   |   |   |   |   | 0  |           |  |
| 3         |                | 18                   | 17.7       | 18.3  | 18.13                       |   |   |   |   |   |   |   | 0  |           |  |
| 4         |                | 3.75                 | 3.55       | 3.95  | 3.77                        |   |   |   |   |   |   |   | 0  |           |  |
| 5         |                | 2                    | 1.8        | 2.2   | 2.01                        |   |   |   |   |   |   |   | 0  |           |  |
| 6         |                | 0.75                 | 0.55       | 0.95  | 0.69                        |   |   |   |   |   |   |   | 0  |           |  |
| 7         |                | 2.6                  | 2.3        | 2.9   | 2.65                        |   |   |   |   |   |   |   | 0  |           |  |
| 8         |                | 2.2                  | Ref        |       | 2.16                        |   |   |   |   |   |   |   | -  |           |  |
| 9         |                | 4.3                  | 4.0        | 4.6   | 4.20                        |   |   |   |   |   |   |   | 0  |           |  |
| 10        |                | 3.4                  | Ref        |       | 3.39                        |   |   |   |   |   |   |   | -  |           |  |
| 11        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 12        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 13        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 14        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 15        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 16        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 17        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 18        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 19        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 20        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 21        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 22        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 23        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 24        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 25        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 26        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 27        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 28        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 29        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 30        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 31        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 32        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 33        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 34        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 35        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 36        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 37        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 38        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 39        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 40        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 41        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 42        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 43        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 44        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |
| 45        |                |                      |            |       |                             |   |   |   |   |   |   |   |    |           |  |

Inspection Source Company Name

|                     |           |       |                                               |                        |            |
|---------------------|-----------|-------|-----------------------------------------------|------------------------|------------|
| Inspected by        | Y.Hattori | Title | QA STAFF                                      | Inspection Report Date | 31.Jan.'17 |
| Inspctor Supervisor |           | Title |                                               | Date                   |            |
| Approved by         | K.Ota     | Title | Components Gr. QA Dep. Deputy General Manager | Date                   | 31.Jan.'17 |

## MATERIAL TEST RESULTS

Supplier  
Part Certification

SUMITOMO WIRING SYSTEMS Ltd.

Mold:SZ1

Page 1 of 1

|                              |                |
|------------------------------|----------------|
| Supplier                     | Part Number    |
| SUMITOMO WIRING SYSTEMS Ltd. | 8240-0509      |
| Name of Laboratory           | Part Name      |
| SUMITOMO WIRING SYSTEMS Ltd. | TER-WUS120FSSN |

[illegible]

Signature *K. Ota*

K. Ota

|                                               |
|-----------------------------------------------|
| Title                                         |
| Components Gr. QA Dep. Deputy General Manager |

Components Gr. QA Dep. Deputy General Manager

|      |            |
|------|------------|
| Date | 31.Jan.'17 |
|------|------------|

31.Jan.'17

## MATERIAL TEST RESULTS

### Supplier Part Certification

SUMITOMO WIRING SYSTEMS Ltd.

Mold:SZ2

Page 1 of 1

|                              |                |
|------------------------------|----------------|
| Supplier                     | Part Number    |
| SUMITOMO WIRING SYSTEMS Ltd. | 8240-0509      |
| Name of Laboratory           | Part Name      |
| SUMITOMO WIRING SYSTEMS Ltd. | TER-WUS120FSSN |

[illegible]

Signature *K. Ota*

K. Ota

|                                               |
|-----------------------------------------------|
| Title                                         |
| Components Gr. QA Dep. Deputy General Manager |

Components Gr. QA Dep. Deputy General Manager

|      |            |
|------|------------|
| Date | 31.Jan.'17 |
|------|------------|

31.Jan.'17

## MATERIAL TEST RESULTS

### Supplier Part Certification

SUMITOMO WIRING SYSTEMS Ltd.

Mold:SZ3

Page 1 of 1

|                              |                |
|------------------------------|----------------|
| Supplier                     | Part Number    |
| SUMITOMO WIRING SYSTEMS Ltd. | 8240-0509      |
| Name of Laboratory           | Part Name      |
| SUMITOMO WIRING SYSTEMS Ltd. | TER-WUS120FSSN |

[illegible]

Signature

K. Ota

Title

Components Gr. QA Dep. Deputy General Manager

Date

31.Jan.'17





## PERFORMANCE TEST

SUMITOMO WIRING SYSTEMS Ltd

Mold:SZ3

Page

1 of 1

|                             |                |
|-----------------------------|----------------|
| Supplier                    | Part Number    |
| SUMITOMO WIRING SYSTEMS Ltd | 8240-0509      |
| Name of Laboratory          | Part Name      |
| SUMITOMO WIRING SYSTEMS Ltd | TER-WUS120FSSN |

[illegible]

K. Ota

Components Gr. QA Dep. Deputy General Manager

31.Jan.'17

31.Jan.'17

## Process Capability data

Part Name: TER-WUS120FSSN

Part No: 8240-0509

*K. Ota*

Mold:SZ1

| Measurement Place | 1      |  |  |  |  |  |  |
|-------------------|--------|--|--|--|--|--|--|
| Standard          | 2.55   |  |  |  |  |  |  |
| UCL               | 2.75   |  |  |  |  |  |  |
| LCL               | 2.35   |  |  |  |  |  |  |
| n1                | 2.560  |  |  |  |  |  |  |
| n2                | 2.550  |  |  |  |  |  |  |
| n3                | 2.570  |  |  |  |  |  |  |
| n4                | 2.550  |  |  |  |  |  |  |
| n5                | 2.560  |  |  |  |  |  |  |
| n6                | 2.550  |  |  |  |  |  |  |
| n7                | 2.550  |  |  |  |  |  |  |
| n8                | 2.560  |  |  |  |  |  |  |
| n9                | 2.560  |  |  |  |  |  |  |
| n10               | 2.560  |  |  |  |  |  |  |
| n11               | 2.550  |  |  |  |  |  |  |
| n12               | 2.560  |  |  |  |  |  |  |
| n13               | 2.560  |  |  |  |  |  |  |
| n14               | 2.560  |  |  |  |  |  |  |
| n15               | 2.560  |  |  |  |  |  |  |
| n16               | 2.560  |  |  |  |  |  |  |
| n17               | 2.550  |  |  |  |  |  |  |
| n18               | 2.560  |  |  |  |  |  |  |
| n19               | 2.550  |  |  |  |  |  |  |
| n20               | 2.560  |  |  |  |  |  |  |
| n21               | 2.560  |  |  |  |  |  |  |
| n22               | 2.560  |  |  |  |  |  |  |
| n23               | 2.560  |  |  |  |  |  |  |
| n24               | 2.550  |  |  |  |  |  |  |
| n25               | 2.550  |  |  |  |  |  |  |
| n26               | 2.550  |  |  |  |  |  |  |
| n27               | 2.550  |  |  |  |  |  |  |
| n28               | 2.560  |  |  |  |  |  |  |
| n29               | 2.560  |  |  |  |  |  |  |
| n30               | 2.540  |  |  |  |  |  |  |
| x                 | 2.560  |  |  |  |  |  |  |
| MAX               | 2.570  |  |  |  |  |  |  |
| MIN               | 2.540  |  |  |  |  |  |  |
| $\delta$          | 0.005  |  |  |  |  |  |  |
| CP                | 13.333 |  |  |  |  |  |  |
| CPK               | 12.933 |  |  |  |  |  |  |

Measurement Place

Please refer to an attached sheet drawing

## Process Capability data

Part Name: TER-WUS120FSSN

Part No: 8240-0509

*K. Ota*

Mold:SZ2

| Measurement Place | 1      |  |  |  |  |  |  |
|-------------------|--------|--|--|--|--|--|--|
| Standard          | 2.55   |  |  |  |  |  |  |
| UCL               | 2.75   |  |  |  |  |  |  |
| LCL               | 2.35   |  |  |  |  |  |  |
| n1                | 2.520  |  |  |  |  |  |  |
| n2                | 2.530  |  |  |  |  |  |  |
| n3                | 2.520  |  |  |  |  |  |  |
| n4                | 2.520  |  |  |  |  |  |  |
| n5                | 2.520  |  |  |  |  |  |  |
| n6                | 2.530  |  |  |  |  |  |  |
| n7                | 2.520  |  |  |  |  |  |  |
| n8                | 2.520  |  |  |  |  |  |  |
| n9                | 2.520  |  |  |  |  |  |  |
| n10               | 2.530  |  |  |  |  |  |  |
| n11               | 2.530  |  |  |  |  |  |  |
| n12               | 2.520  |  |  |  |  |  |  |
| n13               | 2.510  |  |  |  |  |  |  |
| n14               | 2.530  |  |  |  |  |  |  |
| n15               | 2.520  |  |  |  |  |  |  |
| n16               | 2.520  |  |  |  |  |  |  |
| n17               | 2.520  |  |  |  |  |  |  |
| n18               | 2.520  |  |  |  |  |  |  |
| n19               | 2.530  |  |  |  |  |  |  |
| n20               | 2.530  |  |  |  |  |  |  |
| n21               | 2.530  |  |  |  |  |  |  |
| n22               | 2.540  |  |  |  |  |  |  |
| n23               | 2.530  |  |  |  |  |  |  |
| n24               | 2.520  |  |  |  |  |  |  |
| n25               | 2.530  |  |  |  |  |  |  |
| n26               | 2.530  |  |  |  |  |  |  |
| n27               | 2.530  |  |  |  |  |  |  |
| n28               | 2.520  |  |  |  |  |  |  |
| n29               | 2.530  |  |  |  |  |  |  |
| n30               | 2.520  |  |  |  |  |  |  |
| x                 | 2.520  |  |  |  |  |  |  |
| MAX               | 2.540  |  |  |  |  |  |  |
| MIN               | 2.510  |  |  |  |  |  |  |
| $\delta$          | 0.005  |  |  |  |  |  |  |
| CP                | 13.333 |  |  |  |  |  |  |
| CPK               | 11.647 |  |  |  |  |  |  |

Measurement Place

Please refer to an attached sheet drawing

## Process Capability data

Part Name: TER-WUS120FSSN

Part No: 8240-0509

*K. Ota*

Mold:SZ3

| Measurement Place | 1      |  |  |  |  |  |  |
|-------------------|--------|--|--|--|--|--|--|
| Standard          | 2.55   |  |  |  |  |  |  |
| UCL               | 2.75   |  |  |  |  |  |  |
| LCL               | 2.35   |  |  |  |  |  |  |
| n1                | 2.540  |  |  |  |  |  |  |
| n2                | 2.530  |  |  |  |  |  |  |
| n3                | 2.530  |  |  |  |  |  |  |
| n4                | 2.530  |  |  |  |  |  |  |
| n5                | 2.530  |  |  |  |  |  |  |
| n6                | 2.540  |  |  |  |  |  |  |
| n7                | 2.530  |  |  |  |  |  |  |
| n8                | 2.520  |  |  |  |  |  |  |
| n9                | 2.530  |  |  |  |  |  |  |
| n10               | 2.530  |  |  |  |  |  |  |
| n11               | 2.540  |  |  |  |  |  |  |
| n12               | 2.540  |  |  |  |  |  |  |
| n13               | 2.530  |  |  |  |  |  |  |
| n14               | 2.540  |  |  |  |  |  |  |
| n15               | 2.540  |  |  |  |  |  |  |
| n16               | 2.540  |  |  |  |  |  |  |
| n17               | 2.530  |  |  |  |  |  |  |
| n18               | 2.540  |  |  |  |  |  |  |
| n19               | 2.550  |  |  |  |  |  |  |
| n20               | 2.530  |  |  |  |  |  |  |
| n21               | 2.540  |  |  |  |  |  |  |
| n22               | 2.530  |  |  |  |  |  |  |
| n23               | 2.530  |  |  |  |  |  |  |
| n24               | 2.540  |  |  |  |  |  |  |
| n25               | 2.530  |  |  |  |  |  |  |
| n26               | 2.530  |  |  |  |  |  |  |
| n27               | 2.530  |  |  |  |  |  |  |
| n28               | 2.530  |  |  |  |  |  |  |
| n29               | 2.540  |  |  |  |  |  |  |
| n30               | 2.530  |  |  |  |  |  |  |
| x                 | 2.530  |  |  |  |  |  |  |
| MAX               | 2.550  |  |  |  |  |  |  |
| MIN               | 2.520  |  |  |  |  |  |  |
| $\delta$          | 0.005  |  |  |  |  |  |  |
| CP                | 13.333 |  |  |  |  |  |  |
| CPK               | 12.267 |  |  |  |  |  |  |

Measurement Place

Please refer to an attached sheet drawing

| 2016                 |           |             |
|----------------------|-----------|-------------|
| Approval             | Check     | Charged     |
| M.Imamura<br>Manager | K.Motooka | Y.Hanebuchi |
| 2016/3/31            | 2016/3/31 | 2016/3/31   |

| Testing Items                                                                                                                        | Testing & Measurement Apparatus                                                | Location   |            | Instruction Manual No. | machine number | Capability of Testing & Measurement Apparatus                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | proof inspection |            |            |            |    |    |    |    |    |    |     |                     |      |     |      |        |      |      |      |      |     |     |                    |     |     |       |     |     |     |     |     |     |     |                        |     |     |       |       |       |       |       |       |       |       |                        |           |     |     |           |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------|------------|------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------|------------|------------|----|----|----|----|----|----|-----|---------------------|------|-----|------|--------|------|------|------|------|-----|-----|--------------------|-----|-----|-------|-----|-----|-----|-----|-----|-----|-----|------------------------|-----|-----|-------|-------|-------|-------|-------|-------|-------|-------|------------------------|-----------|-----|-----|-----------|-----------|-----------|-----------|--------|--|--|---------------------|------------|-----|-----|------------|------------|------------|------------|------------|--|--|--------------------|----------|-----|-----|----------|----------|----------|----------|----------|--|--|------------------------|-------|-------|-------|-------|-------|--|-----|-----|-----|-----|---------------------|--|--|------|--|--|--|------|------|------|------|------------------|--|--|-----|--|--|--|----|----|----|----|--------------------|--|--|-----|--|--|--|-----|-----|------|-----|---------------|--|--|-----------|--|--|--|-----------|-----------|-----------|------------|---------------------|--|--|------------|--|--|--|------------|------------|------------|------------|---------------|--|--|----------|--|--|--|----------|----------|----------|----------|------------------------|-----|-----|-----|-----|-----|-----|--|--|--|--|---------------------|------|------|------|------|------|------|--|--|--|--|------------------|----|----|----|----|----|----|--|--|--|--|--------------------|-----|-----|------|------|------|------|--|--|--|--|---------------|-----------|-----------|-----------|-----------|-----------|-----------|--|--|--|--|---------------------|------------|------------|------------|------------|------------|------------|--|--|--|--|---------------|----------|----------|----------|----------|----------|----------|--|--|--|--|----|
|                                                                                                                                      |                                                                                | 1<br>F     | 3<br>T     |                        |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  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| Vibration test<br>Shock test<br>Combined stress test<br>Vibration/Mechanical Shock                                                   | Combined stress tester                                                         | ●          |            | SCD-35AG081            | 17             | <table><tr><td><b>Table-1</b></td><td>#1</td><td></td><td></td><td>#4</td><td>#5</td><td>#6</td><td>#7</td><td>#8</td><td></td><td></td></tr><tr><td>Exciting Force(kgf)</td><td>3800</td><td></td><td></td><td>2500</td><td>2000</td><td>2000</td><td>1400</td><td>1400</td><td></td><td></td></tr><tr><td>Amplitude(mmP-P)</td><td>56</td><td></td><td></td><td>51</td><td>26</td><td>26</td><td>51</td><td>51</td><td></td><td></td></tr><tr><td>Acceleration(m/s2)</td><td>980</td><td></td><td></td><td>940</td><td>980</td><td>980</td><td>911</td><td>911</td><td></td><td></td></tr><tr><td>Frequency(Hz)</td><td>5 to 2000</td><td></td><td></td><td>5 to 2500</td><td>5 to 2500</td><td>5 to 2500</td><td>5 to 5000</td><td>5~5000</td><td></td><td></td></tr><tr><td>Temperature(deg. C)</td><td>-40 to 200</td><td></td><td></td><td>-40 to 200</td><td>-40 to 200</td><td>-40 to 200</td><td>-40 to 200</td><td>-40 to 200</td><td></td><td></td></tr><tr><td>Humidity(%RH)</td><td>30 to 98</td><td></td><td></td><td>30 to 98</td><td>30 to 98</td><td>30 to 98</td><td>30 to 98</td><td>30 to 98</td><td></td><td></td></tr><tr><td><b>Table-1 (cont.)</b></td><td></td><td></td><td>#13</td><td></td><td></td><td></td><td>#17</td><td>#18</td><td>#19</td><td>#20</td></tr><tr><td>Exciting Force(kgf)</td><td></td><td></td><td>1400</td><td></td><td></td><td></td><td>2500</td><td>3823</td><td>2450</td><td>2651</td></tr><tr><td>Amplitude(mmP-P)</td><td></td><td></td><td>100</td><td></td><td></td><td></td><td>60</td><td>56</td><td>51</td><td>60</td></tr><tr><td>Acceleration(m/s2)</td><td></td><td></td><td>568</td><td></td><td></td><td></td><td>756</td><td>980</td><td>1142</td><td>963</td></tr><tr><td>Frequency(Hz)</td><td></td><td></td><td>5 to 2000</td><td></td><td></td><td></td><td>5 to 2000</td><td>5 to 2000</td><td>5 to 2500</td><td>DC to 2500</td></tr><tr><td>Temperature(deg. C)</td><td></td><td></td><td>-40 to 200</td><td></td><td></td><td></td><td>-40 to 200</td><td>-40 to 200</td><td>-60 to 180</td><td>-40 to 200</td></tr><tr><td>Humidity(%RH)</td><td></td><td></td><td>30 to 98</td><td></td><td></td><td></td><td>30 to 98</td><td>30 to 98</td><td>30 to 98</td><td>30 to 98</td></tr><tr><td><b>Table-1 (cont.)</b></td><td>#21</td><td>#22</td><td>#23</td><td>#24</td><td>#25</td><td>#26</td><td></td><td></td><td></td><td></td></tr><tr><td>Exciting Force(kgf)</td><td>2500</td><td>2500</td><td>2500</td><td>2500</td><td>2447</td><td>4500</td><td></td><td></td><td></td><td></td></tr><tr><td>Amplitude(mmP-P)</td><td>60</td><td>60</td><td>51</td><td>51</td><td>51</td><td>51</td><td></td><td></td><td></td><td></td></tr><tr><td>Acceleration(m/s2)</td><td>963</td><td>963</td><td>1142</td><td>1142</td><td>1142</td><td>1000</td><td></td><td></td><td></td><td></td></tr><tr><td>Frequency(Hz)</td><td>5 to 2500</td><td>5 to 2500</td><td>5 to 2600</td><td>5 to 2600</td><td>5 to 2600</td><td>5 to 2800</td><td></td><td></td><td></td><td></td></tr><tr><td>Temperature(deg. C)</td><td>-40 to 200</td><td>-40 to 200</td><td>-60 to 180</td><td>-60 to 180</td><td>-60 to 180</td><td>-45 to 180</td><td></td><td></td><td></td><td></td></tr><tr><td>Humidity(%RH)</td><td>30 to 98</td><td>30 to 98</td><td>30 to 98</td><td>30 to 98</td><td>30 to 98</td><td>30 to 98</td><td></td><td></td><td></td><td></td></tr></table> | <b>Table-1</b>   | #1         |            |            | #4 | #5 | #6 | #7 | #8 |    |     | Exciting Force(kgf) | 3800 |     |      | 2500   | 2000 | 2000 | 1400 | 1400 |     |     | Amplitude(mmP-P)   | 56  |     |       | 51  | 26  | 26  | 51  | 51  |     |     | Acceleration(m/s2)     | 980 |     |       | 940   | 980   | 980   | 911   | 911   |       |       | Frequency(Hz)          | 5 to 2000 |     |     | 5 to 2500 | 5 to 2500 | 5 to 2500 | 5 to 5000 | 5~5000 |  |  | Temperature(deg. C) | -40 to 200 |     |     | -40 to 200 | -40 to 200 | -40 to 200 | -40 to 200 | -40 to 200 |  |  | Humidity(%RH)      | 30 to 98 |     |     | 30 to 98 | 30 to 98 | 30 to 98 | 30 to 98 | 30 to 98 |  |  | <b>Table-1 (cont.)</b> |       |       | #13   |       |       |  | #17 | #18 | #19 | #20 | Exciting Force(kgf) |  |  | 1400 |  |  |  | 2500 | 3823 | 2450 | 2651 | Amplitude(mmP-P) |  |  | 100 |  |  |  | 60 | 56 | 51 | 60 | Acceleration(m/s2) |  |  | 568 |  |  |  | 756 | 980 | 1142 | 963 | Frequency(Hz) |  |  | 5 to 2000 |  |  |  | 5 to 2000 | 5 to 2000 | 5 to 2500 | DC to 2500 | Temperature(deg. C) |  |  | -40 to 200 |  |  |  | -40 to 200 | -40 to 200 | -60 to 180 | -40 to 200 | Humidity(%RH) |  |  | 30 to 98 |  |  |  | 30 to 98 | 30 to 98 | 30 to 98 | 30 to 98 | <b>Table-1 (cont.)</b> | #21 | #22 | #23 | #24 | #25 | #26 |  |  |  |  | Exciting Force(kgf) | 2500 | 2500 | 2500 | 2500 | 2447 | 4500 |  |  |  |  | Amplitude(mmP-P) | 60 | 60 | 51 | 51 | 51 | 51 |  |  |  |  | Acceleration(m/s2) | 963 | 963 | 1142 | 1142 | 1142 | 1000 |  |  |  |  | Frequency(Hz) | 5 to 2500 | 5 to 2500 | 5 to 2600 | 5 to 2600 | 5 to 2600 | 5 to 2800 |  |  |  |  | Temperature(deg. C) | -40 to 200 | -40 to 200 | -60 to 180 | -60 to 180 | -60 to 180 | -45 to 180 |  |  |  |  | Humidity(%RH) | 30 to 98 | 30 to 98 | 30 to 98 | 30 to 98 | 30 to 98 | 30 to 98 |  |  |  |  | OK |
| <b>Table-1</b>                                                                                                                       | #1                                                                             |            |            | #4                     | #5             | #6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | #7               | #8         |            |            |    |    |    |    |    |    |     |                     |      |     |      |        |      |      |      |      |     |     |                    |     |     |       |     |     |     |     |     |     |     |                        |     |     |       |       |       |       |       |       |       |       |                        |           |     |     |           |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Exciting Force(kgf)                                                                                                                  | 3800                                                                           |            |            | 2500                   | 2000           | 2000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Amplitude(mmP-P)                                                                                                                     | 56                                                                             |            |            | 51                     | 26             | 26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Acceleration(m/s2)                                                                                                                   | 980                                                                            |            |            | 940                    | 980            | 980                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Frequency(Hz)                                                                                                                        | 5 to 2000                                                                      |            |            | 5 to 2500              | 5 to 2500      | 5 to 2500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Temperature(deg. C)                                                                                                                  | -40 to 200                                                                     |            |            | -40 to 200             | -40 to 200     | -40 to 200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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  |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Humidity(%RH)                                                                                                                        | 30 to 98                                                                       |            |            | 30 to 98               | 30 to 98       | 30 to 98                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  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| <b>Table-1 (cont.)</b>                                                                                                               |                                                                                |            | #13        |                        |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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| Exciting Force(kgf)                                                                                                                  |                                                                                |            | 1400       |                        |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Amplitude(mmP-P)                                                                                                                     |                                                                                |            | 100        |                        |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Acceleration(m/s2)                                                                                                                   |                                                                                |            | 568        |                        |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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| Frequency(Hz)                                                                                                                        |                                                                                |            | 5 to 2000  |                        |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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| Temperature(deg. C)                                                                                                                  |                                                                                |            | -40 to 200 |                        |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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  |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                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| Humidity(%RH)                                                                                                                        |                                                                                |            | 30 to 98   |                        |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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| <b>Table-1 (cont.)</b>                                                                                                               | #21                                                                            | #22        | #23        | #24                    | #25            | #26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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|  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Exciting Force(kgf)                                                                                                                  | 2500                                                                           | 2500       | 2500       | 2500                   | 2447           | 4500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Amplitude(mmP-P)                                                                                                                     | 60                                                                             | 60         | 51         | 51                     | 51             | 51                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Acceleration(m/s2)                                                                                                                   | 963                                                                            | 963        | 1142       | 1142                   | 1142           | 1000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  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| Frequency(Hz)                                                                                                                        | 5 to 2500                                                                      | 5 to 2500  | 5 to 2600  | 5 to 2600              | 5 to 2600      | 5 to 2800                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Temperature(deg. C)                                                                                                                  | -40 to 200                                                                     | -40 to 200 | -60 to 180 | -60 to 180             | -60 to 180     | -45 to 180                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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  |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Humidity(%RH)                                                                                                                        | 30 to 98                                                                       | 30 to 98   | 30 to 98   | 30 to 98               | 30 to 98       | 30 to 98                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Salt water spray                                                                                                                     | Combined corrosion tester                                                      | ●          |            | SCD-35AG071            | 4              | <table><tr><td><b>Table-2</b></td><td>#1</td><td>#2</td><td>#3</td><td>#4</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Temperature(deg. C)</td><td>~35℃</td><td></td><td>~50℃</td><td>Max60℃</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>spray rate</td><td>1ml</td><td></td><td>1~2ml</td><td>—</td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Table-2</b>   | #1         | #2         | #3         | #4 |    |    |    |    |    |     | Temperature(deg. C) | ~35℃ |     | ~50℃ | Max60℃ |      |      |      |      |     |     | spray rate         | 1ml |     | 1~2ml | —   |     |     |     |     |     |     | OK                     |     |     |       |       |       |       |       |       |       |       |                        |           |     |     |           |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| <b>Table-2</b>                                                                                                                       | #1                                                                             | #2         | #3         | #4                     |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Temperature(deg. C)                                                                                                                  | ~35℃                                                                           |            | ~50℃       | Max60℃                 |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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  |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                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| spray rate                                                                                                                           | 1ml                                                                            |            | 1~2ml      | —                      |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Thermal shock test                                                                                                                   | Thermal Shock chamber                                                          | ●          |            | SCD-35AG072            | 13             | <table><tr><td><b>Table-3</b></td><td>#1</td><td>#2</td><td></td><td>#4</td><td></td><td></td><td></td><td>#8</td><td>#9</td><td>#10</td></tr><tr><td>Temp. Low(deg. C)</td><td>-70</td><td>-65</td><td></td><td>-65</td><td></td><td></td><td></td><td>-70</td><td>-70</td><td>-70</td></tr><tr><td>Temp. High(deg. C)</td><td>200</td><td>200</td><td></td><td>200</td><td></td><td></td><td></td><td>200</td><td>200</td><td>200</td></tr><tr><td><b>Table-3 (cont.)</b></td><td>#11</td><td>#12</td><td>#13</td><td>#14</td><td>#15</td><td>#16</td><td>#17</td><td></td><td></td><td></td></tr><tr><td>Temp. Low(deg. C)</td><td>-70</td><td>-70</td><td>-70</td><td>-70</td><td>-70</td><td>-70</td><td>-70</td><td></td><td></td><td></td></tr><tr><td>Temp. High(deg. C)</td><td>200</td><td>200</td><td>200</td><td>200</td><td>200</td><td>200</td><td>200</td><td></td><td></td><td></td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Table-3</b>   | #1         | #2         |            | #4 |    |    |    | #8 | #9 | #10 | Temp. Low(deg. C)   | -70  | -65 |      | -65    |      |      |      | -70  | -70 | -70 | Temp. High(deg. C) | 200 | 200 |       | 200 |     |     |     | 200 | 200 | 200 | <b>Table-3 (cont.)</b> | #11 | #12 | #13   | #14   | #15   | #16   | #17   |       |       |       | Temp. Low(deg. C)      | -70       | -70 | -70 | -70       | -70       | -70       | -70       |        |  |  | Temp. High(deg. C)  | 200        | 200 | 200 | 200        | 200        | 200        | 200        |            |  |  | OK                 |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| <b>Table-3</b>                                                                                                                       | #1                                                                             | #2         |            | #4                     |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Temp. Low(deg. C)                                                                                                                    | -70                                                                            | -65        |            | -65                    |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             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    |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Temp. High(deg. C)                                                                                                                   | 200                                                                            | 200        |            | 200                    |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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   |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| <b>Table-3 (cont.)</b>                                                                                                               | #11                                                                            | #12        | #13        | #14                    | #15            | #16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Temp. Low(deg. C)                                                                                                                    | -70                                                                            | -70        | -70        | -70                    | -70            | -70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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    |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Temp. High(deg. C)                                                                                                                   | 200                                                                            | 200        | 200        | 200                    | 200            | 200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          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   |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Dewing test                                                                                                                          | Thermal Shock with Humidity chamber                                            | ●          |            | SCD-35AG094            | 3              | <table><tr><td><b>Table-4</b></td><td>#1</td><td>#2</td><td>#3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Temp. Low(deg. C)</td><td>-55</td><td>-55</td><td>-55</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Temp. High(deg. C)</td><td>200</td><td>200</td><td>200</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Humidity(%RH)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Table-4</b>   | #1         | #2         | #3         |    |    |    |    |    |    |     | Temp. Low(deg. C)   | -55  | -55 | -55  |        |      |      |      |      |     |     | Temp. High(deg. C) | 200 | 200 | 200   |     |     |     |     |     |     |     | Humidity(%RH)          |     |     |       |       |       |       |       |       |       |       | OK                     |           |     |     |           |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| <b>Table-4</b>                                                                                                                       | #1                                                                             | #2         | #3         |                        |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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| Temp. Low(deg. C)                                                                                                                    | -55                                                                            | -55        | -55        |                        |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             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    |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Temp. High(deg. C)                                                                                                                   | 200                                                                            | 200        | 200        |                        |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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   |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Humidity(%RH)                                                                                                                        |                                                                                |            |            |                        |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Water resistance                                                                                                                     | Water spray tester                                                             | ●          |            | SCD-35AG072            | 2              | Temp. range : ambient temp. to 150deg. C<br>JIS D0203 R1(1.9L/min)・R2(3.2L/min)<br>JIS D0203 S1(24.5L/min)・S2(39.2L/min)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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|       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Humidity resistance test<br>Temperature/humidity cycling test<br>Low temperature test                                                | Temperature & Humidity Chamber                                                 | ●          |            | SCD-35AG037            | 13             | <table><tr><td><b>Table-5</b></td><td></td><td></td><td>#3</td><td>#4</td><td>#5</td><td>#6</td><td>#7</td><td>#8</td><td>#9</td><td>#10</td></tr><tr><td>Temp. Low(deg. C)</td><td></td><td></td><td>-70</td><td>-70</td><td>-70</td><td>-70</td><td>-70</td><td>-70</td><td>-70</td><td>-70</td></tr><tr><td>Temp. High(deg. C)</td><td></td><td></td><td>180</td><td>180</td><td>150</td><td>150</td><td>180</td><td>150</td><td>150</td><td>150</td></tr><tr><td>Humidity(%RH)</td><td></td><td></td><td>20~98</td><td>20~98</td><td>20~98</td><td>20~98</td><td>30~98</td><td>20~98</td><td>20~98</td><td>20~98</td></tr><tr><td><b>Table-5 (cont.)</b></td><td>#11</td><td>#12</td><td>#13</td><td>#14</td><td>#15</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Temp. Low(deg. C)</td><td>-70</td><td>-70</td><td>-70</td><td>-70</td><td>-70</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Temp. High(deg. C)</td><td>150</td><td>150</td><td>150</td><td>150</td><td>150</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Humidity(%RH)</td><td>20~98</td><td>20~98</td><td>30~95</td><td>30~95</td><td>30~95</td><td></td><td></td><td></td><td></td><td></td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Table-5</b>   |            |            | #3         | #4 | #5 | #6 | #7 | #8 | #9 | #10 | Temp. Low(deg. C)   |      |     | -70  | -70    | -70  | -70  | -70  | -70  | -70 | -70 | Temp. High(deg. C) |     |     | 180   | 180 | 150 | 150 | 180 | 150 | 150 | 150 | Humidity(%RH)          |     |     | 20~98 | 20~98 | 20~98 | 20~98 | 30~98 | 20~98 | 20~98 | 20~98 | <b>Table-5 (cont.)</b> | #11       | #12 | #13 | #14       | #15       |           |           |        |  |  | Temp. Low(deg. C)   | -70        | -70 | -70 | -70        | -70        |            |            |            |  |  | Temp. High(deg. C) | 150      | 150 | 150 | 150      | 150      |          |          |          |  |  | Humidity(%RH)          | 20~98 | 20~98 | 30~95 | 30~95 | 30~95 |  |     |     |     |     | OK                  |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| <b>Table-5</b>                                                                                                                       |                                                                                |            | #3         | #4                     | #5             | #6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  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| Temp. Low(deg. C)                                                                                                                    |                                                                                |            | -70        | -70                    | -70            | -70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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    |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Temp. High(deg. C)                                                                                                                   |                                                                                |            | 180        | 180                    | 150            | 150                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          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   |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Humidity(%RH)                                                                                                                        |                                                                                |            | 20~98      | 20~98                  | 20~98          | 20~98                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 30~98            | 20~98      | 20~98      | 20~98      |    |    |    |    |    |    |     |                     |      |     |      |        |      |      |      |      |     |     |                    |     |     |       |     |     |     |     |     |     |     |                        |     |     |       |       |       |       |       |       |       |       |                        |           |     |     |  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| <b>Table-5 (cont.)</b>                                                                                                               | #11                                                                            | #12        | #13        | #14                    | #15            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  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| Temp. Low(deg. C)                                                                                                                    | -70                                                                            | -70        | -70        | -70                    | -70            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             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    |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |              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| Temp. High(deg. C)                                                                                                                   | 150                                                                            | 150        | 150        | 150                    | 150            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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   |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |               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| Humidity(%RH)                                                                                                                        | 20~98                                                                          | 20~98      | 30~95      | 30~95                  | 30~95          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Oil resistance test<br>Fluid Resistance                                                                                              | Oil bath                                                                       | ●          |            | SCD-35AG106            | 2              | Max. 150deg. C(Aging oven : Max. 200deg. C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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         |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |
| Over current test<br>Temperature rise<br>Current cycle test<br>Maximum Test Current Capability<br>Terminal 1008 Hour Current Cycling | Windless and High Temperature Chamber<br>Power supply recorder<br>thermocouple | ●          |            | SCD-35AG078            | 15             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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         |           |           |           |        |  |  |                     |            |     |     |            |            |            |            |            |  |  |                    |          |     |     |          |          |          |          |          |  |  |                        |       |       |       |       |       |  |     |     |     |     |                     |  |  |      |  |  |  |      |      |      |      |                  |  |  |     |  |  |  |    |    |    |    |                    |  |  |     |  |  |  |     |     |      |     |               |  |  |           |  |  |  |           |           |           |            |                     |  |  |            |  |  |  |            |            |            |            |               |  |  |          |  |  |  |          |          |          |          |                        |     |     |     |     |     |     |  |  |  |  |                     |      |      |      |      |      |      |  |  |  |  |                  |    |    |    |    |    |    |  |  |  |  |                    |     |     |      |      |      |      |  |  |  |  |               |           |           |           |           |           |           |  |  |  |  |                     |            |            |            |            |            |            |  |  |  |  |               |          |          |          |          |          |          |  |  |  |  |    |

| Testing Items                                                                                                                                                                                                                                                                                                                     | Testing & Measurement Apparatus             | Location         |   | Instruction Manual No. | machine number | Capability of Testing & Measurement Apparatus                                                                                                                                                                                                               | proof inspection |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|------------------|---|------------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
|                                                                                                                                                                                                                                                                                                                                   |                                             | Technical Center |   |                        |                |                                                                                                                                                                                                                                                             |                  |
| High temperature Exposure                                                                                                                                                                                                                                                                                                         | Aging Oven                                  | ●                |   | SCD-35AG079            | 15             | Max. 500deg. C                                                                                                                                                                                                                                              | OK               |
| High-pressure washing test                                                                                                                                                                                                                                                                                                        | High-pressure washing machine               | ●                |   | SCD-35AG096            | 1              | Max. 150deg. C<br>Table<br>Nozzle angle 0, 30, 60, 90<br>Pressure MIN[Water pressure5Mpa→11.9L/min]: MAX[Water pressure10Mpa→16.3L/min]<br>φ Nozzle toSample 100mm<br>(Width8mm, Vertical injection angle30)<br>Water temperature Normal temperature to 80℃ | OK               |
| Corrosive gas test                                                                                                                                                                                                                                                                                                                | Gas Corrosion Chamber                       |                  | ● | SCD-35AG103            | 2              | temp. & humidity range:40deg. C 70%RH to 98%RH<br>SO2 : Max. 500ppm<br>H2S : Max. 0. 1ppm<br>NO2 : Max. 0. 2ppm<br>CL2 : Max. 0. 02ppm                                                                                                                      | OK               |
| Dust resistance                                                                                                                                                                                                                                                                                                                   | Dust chamber                                | ●                |   | SCD-35AG123            | 1              | blowing interval: 1 to 30sec.<br>quantity of dust: 5kg Max                                                                                                                                                                                                  | OK               |
| Frozen salt water test                                                                                                                                                                                                                                                                                                            | Salt water immersion test machine           | ●                |   | SCD-35AG172            | 1              | Temperature low-temp-bath: -30℃~+100℃, high-temp-bath: ~+200℃, Immersion: +6~+80℃(150L)<br>Concentration:10%                                                                                                                                                | OK               |
| Fretting Corrosion                                                                                                                                                                                                                                                                                                                | Fretting Corrosion Testing machine          |                  | ● | SCD-35AG156            | 1              | Temperature in a tank : normal temperature to 100℃<br>Movement frequency : 1 to 10Hz<br>Movement distance : ±0.02mm to ±0.5mm                                                                                                                               | OK               |
| Rotary drum drop and impact test                                                                                                                                                                                                                                                                                                  | Rotary drum drop and impact testing Machine | ●                |   | SCD-35AG195            | 1              | Rotational speed : 1~10rpm                                                                                                                                                                                                                                  | OK               |
| momentary shut-off                                                                                                                                                                                                                                                                                                                | Power Supply, oscilloscope                  | ●                |   | SCD-35AG001            | 8              | sensitivity :1mV to 5V/div Sampling Speed : 1ns                                                                                                                                                                                                             | OK               |
| Insertion & Retention force<br>Terminal crimping force<br>Terminal retention force<br>Housing locking force<br>Housing lock release force<br>Twisting durability test<br>Terminal strength<br>Terminal to Terminal Engage/Disengage Force<br>Terminal-Connector Insertion/Extraction Force<br>Connector-Connector Mating/Unmating | Tensile & Comp. Tester/ Push-Pull Tester    |                  | ● | SCD-35AG063            | 2              | Tensile & Comp. Tester<br>speed(mm/min) 1 to 1000<br>load(N) 5,000                                                                                                                                                                                          | OK               |
|                                                                                                                                                                                                                                                                                                                                   |                                             |                  |   |                        | 5              | Push-Pull tester<br>speed(mm/min) 20,50,100,200<br>load(N) 500                                                                                                                                                                                              | OK               |
| Voltage drop<br>Dry Circuit Resistance                                                                                                                                                                                                                                                                                            | Measurement System                          | ●                |   | SCD-35AG031            | 4              | precision voltage : 1uV, current : 10nA                                                                                                                                                                                                                     | OK               |
| Terminal Contact force                                                                                                                                                                                                                                                                                                            | Terminal contact force meas. tester         |                  | ● | SCD-35AG124            | 2              | Load 0.1N to 100N, Speed 0.1mm/min to 1.0mm/min                                                                                                                                                                                                             | OK               |
| Insulation resistance                                                                                                                                                                                                                                                                                                             | Insulation Resistance tester                |                  | ● | SCD-35AG119            | 3              | voltage : :10 to 1000V                                                                                                                                                                                                                                      | OK               |
| Waterproofness<br>Pressure/Vacuum Leakage                                                                                                                                                                                                                                                                                         | Airleak Tester                              |                  | ● | SCD-35AG122            | 5              | pressure : 1kPa to 500kPa, -10kPa to -200kPa                                                                                                                                                                                                                | OK               |
| Withstand voltage                                                                                                                                                                                                                                                                                                                 | Withstand voltage tester                    |                  | ● | SCD-35AG083            | 1              | range :0 to 5KV                                                                                                                                                                                                                                             | OK               |
| Dimension                                                                                                                                                                                                                                                                                                                         | Projector                                   |                  | ● | —                      | 1              | precision:1/1000mm magnification : 10                                                                                                                                                                                                                       | OK               |
| Surface observation                                                                                                                                                                                                                                                                                                               | stereomicroscope, metallurgical microscope  |                  | ● | —                      | 1              | magnification : 1.5,5,10,20,40                                                                                                                                                                                                                              | OK               |
|                                                                                                                                                                                                                                                                                                                                   | Video microscope                            |                  | ● | —                      | 1              | magnification : 5-40、25-175、150-800                                                                                                                                                                                                                         | OK               |
| Section cutting                                                                                                                                                                                                                                                                                                                   | cutting machine, grinder, polisher          |                  | ● | — — —                  | 1              | — — —                                                                                                                                                                                                                                                       | OK               |
| Leakage current                                                                                                                                                                                                                                                                                                                   | Power supply, resister, recorder            | ●                | ● | — — —                  | A lot          | — — —                                                                                                                                                                                                                                                       | OK               |

**製品安全データシート (Material Safety Data Sheet)**

作成：2011年8月24日

MSDS No. : SNP-001

**1. 製品及び会社情報**

|        |                               |
|--------|-------------------------------|
| 製品の名称  | 錫めっき                          |
| 会社情報   |                               |
| 提供者    | DOWAメタルテック株式会社 金属加工事業部        |
| 住 所    | 静岡県磐田市新貝 2630 番地 (〒438-0025)  |
| 製造者    | DOWAメタル株式会社                   |
| 住 所    | 静岡県磐田市松之木島 767 番地 (〒438-0125) |
| 担当部門   | DOWAメタル株式会社 技術部品質管理課          |
| 電話番号   | 0539-62-3131                  |
| FAX番号  | 0539-62-3996                  |
| E-mail | DML_MSDS@dowa.co.jp           |

**2. 危険有害性の要約**

## GHS分類

## 物理化学的危険性

|              |        |
|--------------|--------|
| 火薬類          | 分類対象外  |
| 可燃性・引火性ガス    | 分類対象外  |
| 可燃性・引火性エアゾール | 分類対象外  |
| 支燃性・酸化性ガス類   | 分類対象外  |
| 高压ガス         | 分類対象外  |
| 引火性液体        | 分類対象外  |
| 可燃性固体        | 分類できない |
| 自己反応性化学品     | 分類対象外  |
| 自然発火性液体      | 分類対象外  |
| 自然発火性固体      | 分類できない |
| 自己発熱性化学品     | 分類できない |
| 水反応可燃性化学品    | 分類できない |
| 酸化性液体        | 分類対象外  |
| 酸化性固体        | 分類対象外  |
| 有機過酸化物       | 分類対象外  |
| 金属腐食性物質      | 分類できない |

## 健康に対する有害性

|                    |              |
|--------------------|--------------|
| 急性毒性 (経口)          | 分類できない       |
| 急性毒性 (経皮)          | 分類できない       |
| 急性毒性 (吸入：ガス)       | 分類対象外        |
| 急性毒性 (吸入：蒸気)       | 分類できない       |
| 急性毒性 (吸引：粉じん、ミスト)  | 分類できない (粉じん) |
| 急性毒性 (吸入：粉じん、ミスト)  | 分類対象外 (ミスト)  |
| 皮膚腐食性・刺激性          | 分類できない       |
| 眼に対する重篤な損傷性・眼刺激性   | 分類できない       |
| 呼吸器感受性             | 分類できない       |
| 皮膚感受性              | 分類できない       |
| 生殖細胞変異原性           | 分類できない       |
| 発がん性               | 分類できない       |
| 生殖毒性               | 分類できない       |
| 特定標的臓器・全身毒性 (単回暴露) | 分類できない       |
| 特定標的臓器・全身毒性 (反復暴露) | 区分1 (肺)      |

ラベル要素



|           |                                                                                                       |              |
|-----------|-------------------------------------------------------------------------------------------------------|--------------|
|           | 吸引性呼吸器有害性                                                                                             | 分類できない       |
| 環境に対する有害性 | 水性環境急性有害性<br>水性環境慢性有害性                                                                                | 情報なし<br>情報なし |
| 注意喚起語     | 危険                                                                                                    |              |
| 危険有害性情報   | 長期にわたる、または反復ばく露により肺の障害                                                                                |              |
| 注意書き      |                                                                                                       |              |
| 【安全対策】    | 粉じん、ヒューム、蒸気、スプレーを吸入しないこと。<br>取扱い後はよく手を洗うこと。<br>この製品を使用する時に、飲食または喫煙をしないこと。<br>気分が悪い時は、医師の診断、手当てを受けること。 |              |
| 【応急措置】    |                                                                                                       |              |
| 【保管】      |                                                                                                       |              |
| 【廃棄】      | 内容物、容器を都道府県知事の許可を受けた専門の廃棄物処理業者に業務委託すること。                                                              |              |

### 3. 組成・成分

|                       |             |
|-----------------------|-------------|
| 単一物質・混合物の区別           | 単一物質        |
| 化 学 名                 | 錫 (T i n)   |
| 成分及び含有量               | S n 99.9%以上 |
| 官報公示整理番号<br>(化審法、安衛法) | 対象外 (元素)    |
| C A S 番号              | 7440-35-5   |

### 4. 応急措置

|                  |                                                                                         |
|------------------|-----------------------------------------------------------------------------------------|
| 吸入した場合           | 粉末加工の場合には鼻孔を大量の水で洗い流し、重曹水でうがいをする。被災者を新鮮な空気のある場所に移動し、呼吸しやすい姿勢で休息させること。気分が悪い時は、医師に連絡すること。 |
| 皮膚に付着した場合        | 多量の水と石鹼で洗うこと。                                                                           |
| 目に入った場合          | 水で数分間、注意深く洗うこと。<br>眼の刺激が持続する場合は、医師の診断、手当てを受けること。                                        |
| 飲み込んだ場合          | 口をすすぐこと。<br>気分が悪い時は、医師の診断、手当てを受けること。                                                    |
| 予想される急性症状及び遅発性症状 | データなし                                                                                   |
| 最も重要な兆候及び症状      | データなし                                                                                   |
| 応急措置をする者の保護      | データなし                                                                                   |
| 医師に対する特別注意事項     | データなし                                                                                   |

---

## 5. 火災時の措置

|             |                                                           |
|-------------|-----------------------------------------------------------|
| 消火化剤        | 粉末消火剤、乾燥砂、乾燥珪藻土、水、二酸化炭素                                   |
| 火災時の特定危険有害性 | 消火の際には煙を吸い込まないように適切な保護具を着用する。                             |
| 特定の消火方法     | 移動可能な容器は速やかに移す。上記消化剤を用いて消火する。<br>大量に燃えている場合は、周囲への延焼防止を図る。 |
| 消火を行う者の保護   | 消火活動は風上から行い、有害なガスの吸入を避ける。<br>状況に応じて呼吸保護具を着用する。            |

---

## 6. 漏出時の措置

|                 |                                                                                                              |
|-----------------|--------------------------------------------------------------------------------------------------------------|
| 人体に対する注意事項      | 屋内の場合、処理が終わるまで十分に換気を行う。漏出した場所の周辺に、ロープを張るなどして関係者以外の立ち入りを禁止する。<br>作業の際には適切な保護具を着用し、飛沫等が皮膚に付着したり、粉塵を吸入しないようにする。 |
| 環境に対する注意事項      | 河川等に排出され、環境へ影響を起こさないように注意する。<br>環境中に放出してはならない。                                                               |
| 回収、中和           | 少量の場合、漏洩物は清潔な帯電防止工具を用いて集め、清潔な乾燥した容器に入れ、ゆるく覆いをし、後で廃棄処理する。                                                     |
| 封じ込めおよび浄化の方法・機材 | 危険でなければ漏れを止める。                                                                                               |
| 二次災害の防止策        | 全ての発火源を速やかに取り除く（近傍での喫煙、火花や火炎の禁止）。床面に残るとすべる危険性があるため、こまめに処理する。                                                 |
| 除去方法            | 床面等にこぼれた場合は、掃き集めて空容器に回収する。<br>注水は避ける。                                                                        |

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## 7. 取扱い及び保管上の注意

|     |                                                                                                                  |
|-----|------------------------------------------------------------------------------------------------------------------|
| 取扱い | 蒸気、粉塵吸入防止のため、溶接、研削等の作業においてはマスク等の個人保護具着用の必要がある。<br>めっきされた条の取り扱いについて、切断端、エッジは鋭利な刃物と同様のものとして切傷の原因となるので、十分注意する必要がある。 |
| 貯蔵  | 酸・アルカリと一緒に保管しないこと                                                                                                |

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## 8. 暴露防止及び保護措置

|                                                              |                                                                                                                                                               |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 管理濃度                                                         | 設定されていない                                                                                                                                                      |
| 許容濃度<br>（暴露限界値、生物学的暴露指標<br>日本産業衛生学会（2005年版）<br>ACGIH（2005年版） | 設定されていない<br><br>TLV-TWA 2 mg/m <sup>3</sup>                                                                                                                   |
| 設備対策                                                         | 指定された防爆の電気・換気・照明機器を使用すること。<br>この物質を貯蔵ないし取扱う作業場には洗眼器と安全シャワーを設置すること。<br>空気中の濃度をばく露限度以下に保つために排気用の換気行なうこと。<br>高熱工程で粉じん、ヒュームが発生するときは、空気汚染物質を管理濃度以下に保つために換気装置を設置する。 |

|            |                                                                           |
|------------|---------------------------------------------------------------------------|
| 保護具        | 指定された呼吸器保護具を着用すること。                                                       |
| 呼吸器の保護具    | 適切な保護手袋を着用すること。                                                           |
| 手の保護具      | 適切な眼の保護具を着用すること。                                                          |
| 眼の保護具      | 安全眼鏡を着用すること。撥ね飛び又は噴霧によって眼及び顔面接触が起こりうる時は、包括的な化学スプラッシュゴーグル、及び顔面シールドを着用すること。 |
| 皮膚及び身体の保護具 | 適切な顔面用の保護具を着用すること。                                                        |
|            | 適切な保護衣及び長靴を着用すること。                                                        |
| 衛生対策       | 取扱い後はよく手を洗うこと。                                                            |

9. 物理的及び化学的性質

|                      |         |
|----------------------|---------|
| 物理的状态及び色             | 銀白色の固体  |
| 形状                   | 製品形状による |
| 臭い                   | 無臭      |
| pH及びその濃度             | データなし   |
| 融点℃                  | 231.9   |
| 分解温度                 | データなし   |
| 引火点                  | データなし   |
| 発火点                  | データなし   |
| 爆発特性                 | データなし   |
| 蒸気圧                  | データなし   |
| 蒸気温度（沸点）℃            | 2507    |
| 密度 g/cm <sup>3</sup> | 7.3     |
| 溶媒に対する溶解性            | データなし   |
| オクタノール／水分分配数         | データなし   |

10. 安定性及び反応性

|             |                                                                                                                                    |
|-------------|------------------------------------------------------------------------------------------------------------------------------------|
| 安全性         | 常温・空气中で安定。<br>酸素との親和力は小さく、常温の乾燥した空气中で変色しない。<br>200℃以下では酸化しない。それ以上で表面にSnO <sub>2</sub> 皮膜を生じる。<br>経時や熱により銅またはニッケルと金属間化合物（拡散層）を生成する。 |
| 危険有害反応性可能性  | 強酸化剤、酸類、強塩基類、ハロゲン、硫黄等と反応する。<br>ハロゲンとは急激に反応し、ハロゲン化スズを生成する。<br>アルカリ類との反応は低温で徐々に、高温では急速にすすむ。                                          |
| 避けるべき条件     | 粉じんの拡散                                                                                                                             |
| 混触危険物質      | 強酸化剤、酸類、強塩基類、ハロゲン、硫黄等                                                                                                              |
| 危険有害な分解生成物： | 該当しない（元素）                                                                                                                          |

11. 有害性情報

|                 |           |
|-----------------|-----------|
| 急性毒性            |           |
| 経口              | 情報なし      |
| 経皮              | 情報なし      |
| 吸入（粉塵）          | 情報なし      |
| 皮膚腐食性・刺激性       | 情報なし      |
| 眼に対する重篤な損傷・眼刺激性 | 確定できる情報なし |

|                       |                                                                                                                                                      |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 呼吸器感作性                | 情報なし                                                                                                                                                 |
| 皮膚感作性                 | 情報なし                                                                                                                                                 |
| 生殖細胞変異原性              | データなし                                                                                                                                                |
| 発がん性                  | 確定できる情報なし                                                                                                                                            |
| 生殖毒性                  | 情報なし                                                                                                                                                 |
| 特定標的臓器／全身毒性<br>(単回暴露) | 確定できる情報なし                                                                                                                                            |
| 特定標的臓器／全身毒性<br>(反復暴露) | 金属すずを扱う労働者にじん肺症がみられた。<br>この物質の長期ばく露により、肺に良性じん肺症（錫肺）を引き起こすおそれがある。<br>長期又は反復ばく露による臓器の損傷（区分1）（肺）<br>長期又は繰り返しのばく露があると腎臓障害を起す。<br>長期又は繰り返しのばく露があると肺障害を起す。 |
| 吸引性呼吸器有害性             | データなし                                                                                                                                                |

## 1 2. 環境影響情報

情報なし

## 1 3. 廃棄上の注意

産業廃棄物処理認定業者に委託して処理する。  
資源再利用のため回収し、処理業者に委託する。

## 1 4. 輸送上の注意

|                  |                                                                               |
|------------------|-------------------------------------------------------------------------------|
| ＜国際規制＞           |                                                                               |
| 海上規制情報           | 非危険物                                                                          |
| Marine Pollutant | Not applicable                                                                |
| 航空規制情報           | 非危険物                                                                          |
| ＜国内規制＞           |                                                                               |
| 陸上規制情報           | 非該当                                                                           |
| 海上規制情報           | 非危険物                                                                          |
| 海洋汚染物質           | 非該当                                                                           |
| 航空規制情報           | 非危険物                                                                          |
| ＜特別の安全対策＞        | 転倒もしくは破損しないように積載すること。<br>容器等を著しく摩擦又は振動させないように運搬すること。<br>高温・多湿になる条件を避けて輸送すること。 |

## 1 5. 適用法令

|           |                                                         |
|-----------|---------------------------------------------------------|
| 労働安全衛生法   | 名称等を通知すべき有害物<br>(法第57条の2、施行令第18条の2別表第9)<br>(政令番号 第322号) |
| 毒物劇物取締法   | 非該当                                                     |
| P R T R 法 | 非該当                                                     |
| 消防法       | 非該当                                                     |

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## 16. その他の情報

本製品安全データシートの記載内容は、現時点で入手できた情報やメーカー所有の知見によるものですが、これらのデータや評価はいかなる保証をするものではありません。また全ての資料や文献を調査したものではないため情報漏れがある可能性があり、新しい知見の発表や従来の説の訂正により内容に変更が生じることがあります。

本製品安全データシートは通常の取り扱いを対象としたものであり、本製品はこの製品安全データシートをご参照の上、使用者の責任において適正に取り扱って下さい。

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## PART SUBMISSION WARRANT



|                                                                                                                                                                                                                                                                                                           |                      |                                                                   |                                                |                                                           |                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|------------------------------|
| Part Name<br><b>TER-WUS120FSSN</b>                                                                                                                                                                                                                                                                        |                      |                                                                   |                                                | Cust. Part Number                                         |                              |
| Shown on Drawing No.<br><b>S- 107033</b>                                                                                                                                                                                                                                                                  |                      |                                                                   |                                                | Org. Part Number<br><b>8240-0509</b>                      |                              |
| Engineering Drawing Change Level<br><b>3</b>                                                                                                                                                                                                                                                              |                      |                                                                   |                                                | Dated<br><b>09.Jan.'16</b>                                |                              |
| Additional Engineering Changes<br><b>N/A</b>                                                                                                                                                                                                                                                              |                      |                                                                   |                                                | Dated<br><b>N/A</b>                                       |                              |
| Safety and/or Government Regulation<br><input type="radio"/> Yes <input checked="" type="radio"/> No                                                                                                                                                                                                      |                      | Purchase Order No.<br><b>N/A</b>                                  |                                                | Weight<br><b>0.0002 kg</b>                                |                              |
| Checking Aid No.<br><b>N/A</b>                                                                                                                                                                                                                                                                            |                      | Checking Aid Engineering Change Level<br><b>N/A</b>               |                                                | Dated<br><b>N/A</b>                                       |                              |
| <b>ORGANIZATION MANUFACTURING INFORMATION</b>                                                                                                                                                                                                                                                             |                      |                                                                   |                                                | <b>CUSTOMER SUBMITTAL INFORMATION</b>                     |                              |
| Organization Name & Supplier<br><b>Sumitomo Wiring Systems,Ltd</b>                                                                                                                                                                                                                                        |                      |                                                                   | Vendor Code<br><b>N/A</b>                      |                                                           | Customer Name/Division       |
| Street Address<br><b>2-SHOSEN-CHO</b>                                                                                                                                                                                                                                                                     |                      |                                                                   | Buyer/Buyer Code                               |                                                           |                              |
| City<br><b>Yokkaichi</b>                                                                                                                                                                                                                                                                                  | Region<br><b>Mie</b> | Postal Code<br><b>510-0867</b>                                    | Country<br><b>Japan</b>                        |                                                           | Application                  |
| <b>MATERIALS REPORTING</b>                                                                                                                                                                                                                                                                                |                      |                                                                   |                                                |                                                           |                              |
| Has customer-required Substances of Concern information been reported? <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> n/a                                                                                                                                            |                      |                                                                   |                                                |                                                           |                              |
| Submitted by IMDS or other customer format: <b>IMDS ID 481317658</b>                                                                                                                                                                                                                                      |                      |                                                                   |                                                |                                                           |                              |
| Are polymeric parts identified with appropriate ISO marking codes? <input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> n/a                                                                                                                                                |                      |                                                                   |                                                |                                                           |                              |
| <b>REASON FOR SUBMISSION (Check at least one)</b>                                                                                                                                                                                                                                                         |                      |                                                                   |                                                |                                                           |                              |
| <input checked="" type="radio"/> Initial Submission                                                                                                                                                                                                                                                       |                      | <input type="radio"/> Change to Optional Construction or Material |                                                |                                                           |                              |
| <input type="radio"/> Engineering Change(s)                                                                                                                                                                                                                                                               |                      | <input type="radio"/> Sub-Supplier or Material Source Change      |                                                |                                                           |                              |
| <input type="radio"/> Tooling: Transfer, Replacement, Refurbishment, or additional                                                                                                                                                                                                                        |                      | <input type="radio"/> Change in Part Processing                   |                                                |                                                           |                              |
| <input type="radio"/> Correction of Discrepancy                                                                                                                                                                                                                                                           |                      | <input type="radio"/> Parts Produced at Additional Location       |                                                |                                                           |                              |
| <input type="radio"/> Tooling Inactive >than 1 Year                                                                                                                                                                                                                                                       |                      | <input type="checkbox"/> Other - please specify                   |                                                |                                                           |                              |
| <b>REQUESTED SUBMISSION LEVEL (Check one)</b>                                                                                                                                                                                                                                                             |                      |                                                                   |                                                |                                                           |                              |
| <input type="radio"/> Level 1 - Warrant only (and for designated appearance items, an Appearance Approval Report) submitted to customer                                                                                                                                                                   |                      |                                                                   |                                                |                                                           |                              |
| <input type="radio"/> Level 2 - Warrant with product samples and limited supporting data submitted to customer                                                                                                                                                                                            |                      |                                                                   |                                                |                                                           |                              |
| <input checked="" type="radio"/> Level 3 - warrant with product samples and complete supporting data submitted to customer                                                                                                                                                                                |                      |                                                                   |                                                |                                                           |                              |
| <input type="radio"/> Level 4 - Warrant and other requirements as defined by customer                                                                                                                                                                                                                     |                      |                                                                   |                                                |                                                           |                              |
| <input type="radio"/> Level 5 - Warrant with product samples and complete supporting data reviewed at supplier's manufacturing location.                                                                                                                                                                  |                      |                                                                   |                                                |                                                           |                              |
| <b>SUBMISSION RESULTS</b>                                                                                                                                                                                                                                                                                 |                      |                                                                   |                                                |                                                           |                              |
| The results for <input checked="" type="checkbox"/> dimensional measurements <input checked="" type="checkbox"/> material and functional tests <input type="checkbox"/> appearance criteria <input type="checkbox"/> statistical process package                                                          |                      |                                                                   |                                                |                                                           |                              |
| These results meet all drawing and specification requirements: <input checked="" type="radio"/> Yes <input type="radio"/> No (If "NO" - Explanation Required)                                                                                                                                             |                      |                                                                   |                                                |                                                           |                              |
| Mold/cavity/Production Process                                                                                                                                                                                                                                                                            |                      | Mold: <b>SZ1</b>                                                  |                                                | Cavity: <b>1(SZ1)</b> Production Process: <b>Stamping</b> |                              |
| <b>DECLARATION</b>                                                                                                                                                                                                                                                                                        |                      |                                                                   |                                                |                                                           |                              |
| I affirm that the samples represented by this warrant are representative of our parts which were made by a process that meets all Production Part Approval Process Manual 4th Edition Requirements. I further affirm that these samples were produced at the production rate of <b>153,600 / 8 hours*</b> |                      |                                                                   |                                                |                                                           |                              |
| I also certify that documented evidence of such compliance is on file and available for review. I have noted any deviations from this declaration below.                                                                                                                                                  |                      |                                                                   |                                                |                                                           |                              |
| <b>EXPLANATION / COMMENTS:</b>                                                                                                                                                                                                                                                                            |                      |                                                                   |                                                |                                                           |                              |
| Is each Customer Tool properly tagged and numbered? <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> n/a                                                                                                                                                                          |                      |                                                                   |                                                |                                                           |                              |
| Organization Authorized Signature<br><b>K. Ota</b>                                                                                                                                                                                                                                                        |                      |                                                                   |                                                | Dated<br><b>31.Jan.'17</b>                                |                              |
| Print Name<br><b>Katsuyuki Ota</b>                                                                                                                                                                                                                                                                        |                      |                                                                   | Phone No.<br><b>81-593-45-8216</b>             |                                                           | Fax<br><b>81-593-45-8247</b> |
| Title<br><b>Components Gr. QA Dep. Deputy General Manager</b>                                                                                                                                                                                                                                             |                      |                                                                   | E-mail<br><b>katsuyuki-oota@gate.sws.co.jp</b> |                                                           |                              |
| <b>FOR CUSTOMER USE ONLY (IF APPLICABLE)</b>                                                                                                                                                                                                                                                              |                      |                                                                   |                                                |                                                           |                              |
| Part warrant disposition: <input type="radio"/> Approved <input type="radio"/> Rejected <input type="radio"/> Other                                                                                                                                                                                       |                      |                                                                   |                                                |                                                           |                              |
| Customer Signature                                                                                                                                                                                                                                                                                        |                      |                                                                   |                                                | Dated                                                     |                              |
| Print Name                                                                                                                                                                                                                                                                                                |                      |                                                                   | Customer tracking number (optional)            |                                                           |                              |

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## PART SUBMISSION WARRANT



|                                                                                                                                                                                                                                                                                                           |                      |                                                                   |                                                |                                                           |                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|------------------------------|
| Part Name<br><b>TER-WUS120FSSN</b>                                                                                                                                                                                                                                                                        |                      |                                                                   |                                                | Cust. Part Number                                         |                              |
| Shown on Drawing No.<br><b>S- 107033</b>                                                                                                                                                                                                                                                                  |                      |                                                                   |                                                | Org. Part Number<br><b>8240-0509</b>                      |                              |
| Engineering Drawing Change Level<br><b>3</b>                                                                                                                                                                                                                                                              |                      |                                                                   |                                                | Dated<br><b>09.Jan.'16</b>                                |                              |
| Additional Engineering Changes<br><b>N/A</b>                                                                                                                                                                                                                                                              |                      |                                                                   |                                                | Dated<br><b>N/A</b>                                       |                              |
| Safety and/or Government Regulation<br><input type="radio"/> Yes <input checked="" type="radio"/> No                                                                                                                                                                                                      |                      | Purchase Order No.<br><b>N/A</b>                                  |                                                | Weight<br><b>0.0002 kg</b>                                |                              |
| Checking Aid No.<br><b>N/A</b>                                                                                                                                                                                                                                                                            |                      | Checking Aid Engineering Change Level<br><b>N/A</b>               |                                                | Dated<br><b>N/A</b>                                       |                              |
| <b>ORGANIZATION MANUFACTURING INFORMATION</b>                                                                                                                                                                                                                                                             |                      |                                                                   |                                                | <b>CUSTOMER SUBMITTAL INFORMATION</b>                     |                              |
| Organization Name & Supplier<br><b>Sumitomo Wiring Systems,Ltd</b>                                                                                                                                                                                                                                        |                      |                                                                   | Vendor Code<br><b>N/A</b>                      |                                                           | Customer Name/Division       |
| Street Address<br><b>2-SHOSEN-CHO</b>                                                                                                                                                                                                                                                                     |                      |                                                                   | Buyer/Buyer Code                               |                                                           |                              |
| City<br><b>Yokkaichi</b>                                                                                                                                                                                                                                                                                  | Region<br><b>Mie</b> | Postal Code<br><b>510-0867</b>                                    | Country<br><b>Japan</b>                        |                                                           | Application                  |
| <b>MATERIALS REPORTING</b>                                                                                                                                                                                                                                                                                |                      |                                                                   |                                                |                                                           |                              |
| Has customer-required Substances of Concern information been reported? <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> n/a                                                                                                                                            |                      |                                                                   |                                                |                                                           |                              |
| Submitted by IMDS or other customer format: <b>IMDS ID 481317658</b>                                                                                                                                                                                                                                      |                      |                                                                   |                                                |                                                           |                              |
| Are polymeric parts identified with appropriate ISO marking codes? <input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> n/a                                                                                                                                                |                      |                                                                   |                                                |                                                           |                              |
| <b>REASON FOR SUBMISSION (Check at least one)</b>                                                                                                                                                                                                                                                         |                      |                                                                   |                                                |                                                           |                              |
| <input checked="" type="radio"/> Initial Submission                                                                                                                                                                                                                                                       |                      | <input type="radio"/> Change to Optional Construction or Material |                                                |                                                           |                              |
| <input type="radio"/> Engineering Change(s)                                                                                                                                                                                                                                                               |                      | <input type="radio"/> Sub-Supplier or Material Source Change      |                                                |                                                           |                              |
| <input type="radio"/> Tooling: Transfer, Replacement, Refurbishment, or additional                                                                                                                                                                                                                        |                      | <input type="radio"/> Change in Part Processing                   |                                                |                                                           |                              |
| <input type="radio"/> Correction of Discrepancy                                                                                                                                                                                                                                                           |                      | <input type="radio"/> Parts Produced at Additional Location       |                                                |                                                           |                              |
| <input type="radio"/> Tooling Inactive >than 1 Year                                                                                                                                                                                                                                                       |                      | <input type="checkbox"/> Other - please specify                   |                                                |                                                           |                              |
| <b>REQUESTED SUBMISSION LEVEL (Check one)</b>                                                                                                                                                                                                                                                             |                      |                                                                   |                                                |                                                           |                              |
| <input type="radio"/> Level 1 - Warrant only (and for designated appearance items, an Appearance Approval Report) submitted to customer                                                                                                                                                                   |                      |                                                                   |                                                |                                                           |                              |
| <input type="radio"/> Level 2 - Warrant with product samples and limited supporting data submitted to customer                                                                                                                                                                                            |                      |                                                                   |                                                |                                                           |                              |
| <input checked="" type="radio"/> Level 3 - warrant with product samples and complete supporting data submitted to customer                                                                                                                                                                                |                      |                                                                   |                                                |                                                           |                              |
| <input type="radio"/> Level 4 - Warrant and other requirements as defined by customer                                                                                                                                                                                                                     |                      |                                                                   |                                                |                                                           |                              |
| <input type="radio"/> Level 5 - Warrant with product samples and complete supporting data reviewed at supplier's manufacturing location.                                                                                                                                                                  |                      |                                                                   |                                                |                                                           |                              |
| <b>SUBMISSION RESULTS</b>                                                                                                                                                                                                                                                                                 |                      |                                                                   |                                                |                                                           |                              |
| The results for <input checked="" type="checkbox"/> dimensional measurements <input checked="" type="checkbox"/> material and functional tests <input type="checkbox"/> appearance criteria <input type="checkbox"/> statistical process package                                                          |                      |                                                                   |                                                |                                                           |                              |
| These results meet all drawing and specification requirements: <input checked="" type="radio"/> Yes <input type="radio"/> No (If "NO" - Explanation Required)                                                                                                                                             |                      |                                                                   |                                                |                                                           |                              |
| Mold/cavity/Production Process                                                                                                                                                                                                                                                                            |                      | Mold: <b>SZ2</b>                                                  |                                                | Cavity: <b>1(SZ2)</b> Production Process: <b>Stamping</b> |                              |
| <b>DECLARATION</b>                                                                                                                                                                                                                                                                                        |                      |                                                                   |                                                |                                                           |                              |
| I affirm that the samples represented by this warrant are representative of our parts which were made by a process that meets all Production Part Approval Process Manual 4th Edition Requirements. I further affirm that these samples were produced at the production rate of <b>153,600 / 8 hours*</b> |                      |                                                                   |                                                |                                                           |                              |
| I also certify that documented evidence of such compliance is on file and available for review. I have noted any deviations from this declaration below.                                                                                                                                                  |                      |                                                                   |                                                |                                                           |                              |
| <b>EXPLANATION / COMMENTS:</b>                                                                                                                                                                                                                                                                            |                      |                                                                   |                                                |                                                           |                              |
| Is each Customer Tool properly tagged and numbered? <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> n/a                                                                                                                                                                          |                      |                                                                   |                                                |                                                           |                              |
| Organization Authorized Signature<br><b>K. Ota</b>                                                                                                                                                                                                                                                        |                      |                                                                   |                                                | Dated<br><b>31.Jan.'17</b>                                |                              |
| Print Name<br><b>Katsuyuki Ota</b>                                                                                                                                                                                                                                                                        |                      |                                                                   | Phone No.<br><b>81-593-45-8216</b>             |                                                           | Fax<br><b>81-593-45-8247</b> |
| Title<br><b>Components Gr. QA Dep. Deputy General Manager</b>                                                                                                                                                                                                                                             |                      |                                                                   | E-mail<br><b>katsuyuki-oota@gate.sws.co.jp</b> |                                                           |                              |
| <b>FOR CUSTOMER USE ONLY (IF APPLICABLE)</b>                                                                                                                                                                                                                                                              |                      |                                                                   |                                                |                                                           |                              |
| Part warrant disposition: <input type="radio"/> Approved <input type="radio"/> Rejected <input type="radio"/> Other                                                                                                                                                                                       |                      |                                                                   |                                                |                                                           |                              |
| Customer Signature                                                                                                                                                                                                                                                                                        |                      |                                                                   |                                                | Dated                                                     |                              |
| Print Name                                                                                                                                                                                                                                                                                                |                      |                                                                   | Customer tracking number (optional)            |                                                           |                              |

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## PART SUBMISSION WARRANT



|                                                                                                                                                                                                                                                                                                           |                      |                                                                   |                         |                                                           |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------------------------------------|-------------------------|-----------------------------------------------------------|--|
| Part Name<br><b>TER-WUS120FSSN</b>                                                                                                                                                                                                                                                                        |                      |                                                                   |                         | Cust. Part Number                                         |  |
| Shown on Drawing No.<br><b>S- 107033</b>                                                                                                                                                                                                                                                                  |                      |                                                                   |                         | Org. Part Number<br><b>8240-0509</b>                      |  |
| Engineering Drawing Change Level<br><b>3</b>                                                                                                                                                                                                                                                              |                      |                                                                   |                         | Dated<br><b>09.Jan.'16</b>                                |  |
| Additional Engineering Changes<br><b>N/A</b>                                                                                                                                                                                                                                                              |                      |                                                                   |                         | Dated<br><b>N/A</b>                                       |  |
| Safety and/or Government Regulation<br><input type="radio"/> Yes <input checked="" type="radio"/> No                                                                                                                                                                                                      |                      | Purchase Order No.<br><b>N/A</b>                                  |                         | Weight<br><b>0.0002 kg</b>                                |  |
| Checking Aid No.<br><b>N/A</b>                                                                                                                                                                                                                                                                            |                      | Checking Aid Engineering Change Level<br><b>N/A</b>               |                         | Dated<br><b>N/A</b>                                       |  |
| <b>ORGANIZATION MANUFACTURING INFORMATION</b>                                                                                                                                                                                                                                                             |                      |                                                                   |                         | <b>CUSTOMER SUBMITTAL INFORMATION</b>                     |  |
| Organization Name & Supplier<br><b>Sumitomo Wiring Systems,Ltd</b>                                                                                                                                                                                                                                        |                      | Vendor Code<br><b>N/A</b>                                         |                         | Customer Name/Division                                    |  |
| Street Address<br><b>2-SHOSEN-CHO</b>                                                                                                                                                                                                                                                                     |                      |                                                                   |                         | Buyer/Buyer Code                                          |  |
| City<br><b>Yokkaichi</b>                                                                                                                                                                                                                                                                                  | Region<br><b>Mie</b> | Postal Code<br><b>510-0867</b>                                    | Country<br><b>Japan</b> | Application                                               |  |
| <b>MATERIALS REPORTING</b>                                                                                                                                                                                                                                                                                |                      |                                                                   |                         |                                                           |  |
| Has customer-required Substances of Concern information been reported? <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> n/a                                                                                                                                            |                      |                                                                   |                         |                                                           |  |
| Submitted by IMDS or other customer format: <b>IMDS ID 481317658</b>                                                                                                                                                                                                                                      |                      |                                                                   |                         |                                                           |  |
| Are polymeric parts identified with appropriate ISO marking codes? <input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> n/a                                                                                                                                                |                      |                                                                   |                         |                                                           |  |
| <b>REASON FOR SUBMISSION (Check at least one)</b>                                                                                                                                                                                                                                                         |                      |                                                                   |                         |                                                           |  |
| <input checked="" type="radio"/> Initial Submission                                                                                                                                                                                                                                                       |                      | <input type="radio"/> Change to Optional Construction or Material |                         |                                                           |  |
| <input type="radio"/> Engineering Change(s)                                                                                                                                                                                                                                                               |                      | <input type="radio"/> Sub-Supplier or Material Source Change      |                         |                                                           |  |
| <input type="radio"/> Tooling: Transfer, Replacement, Refurbishment, or additional                                                                                                                                                                                                                        |                      | <input type="radio"/> Change in Part Processing                   |                         |                                                           |  |
| <input type="radio"/> Correction of Discrepancy                                                                                                                                                                                                                                                           |                      | <input type="radio"/> Parts Produced at Additional Location       |                         |                                                           |  |
| <input type="radio"/> Tooling Inactive >than 1 Year                                                                                                                                                                                                                                                       |                      | <input type="checkbox"/> Other - please specify                   |                         |                                                           |  |
| <b>REQUESTED SUBMISSION LEVEL (Check one)</b>                                                                                                                                                                                                                                                             |                      |                                                                   |                         |                                                           |  |
| <input type="radio"/> Level 1 - Warrant only (and for designated appearance items, an Appearance Approval Report) submitted to customer                                                                                                                                                                   |                      |                                                                   |                         |                                                           |  |
| <input type="radio"/> Level 2 - Warrant with product samples and limited supporting data submitted to customer                                                                                                                                                                                            |                      |                                                                   |                         |                                                           |  |
| <input checked="" type="radio"/> Level 3 - warrant with product samples and complete supporting data submitted to customer                                                                                                                                                                                |                      |                                                                   |                         |                                                           |  |
| <input type="radio"/> Level 4 - Warrant and other requirements as defined by customer                                                                                                                                                                                                                     |                      |                                                                   |                         |                                                           |  |
| <input type="radio"/> Level 5 - Warrant with product samples and complete supporting data reviewed at supplier's manufacturing location.                                                                                                                                                                  |                      |                                                                   |                         |                                                           |  |
| <b>SUBMISSION RESULTS</b>                                                                                                                                                                                                                                                                                 |                      |                                                                   |                         |                                                           |  |
| The results for <input checked="" type="checkbox"/> dimensional measurements <input checked="" type="checkbox"/> material and functional tests <input type="checkbox"/> appearance criteria <input type="checkbox"/> statistical process package                                                          |                      |                                                                   |                         |                                                           |  |
| These results meet all drawing and specification requirements: <input checked="" type="radio"/> Yes <input type="radio"/> No (If "NO" - Explanation Required)                                                                                                                                             |                      |                                                                   |                         |                                                           |  |
| Mold/cavity/Production Process                                                                                                                                                                                                                                                                            |                      | Mold: <b>SZ3</b>                                                  |                         | Cavity: <b>1(SZ3)</b> Production Process: <b>Stamping</b> |  |
| <b>DECLARATION</b>                                                                                                                                                                                                                                                                                        |                      |                                                                   |                         |                                                           |  |
| I affirm that the samples represented by this warrant are representative of our parts which were made by a process that meets all Production Part Approval Process Manual 4th Edition Requirements. I further affirm that these samples were produced at the production rate of <b>153,600 / 8 hours*</b> |                      |                                                                   |                         |                                                           |  |
| I also certify that documented evidence of such compliance is on file and available for review. I have noted any deviations from this declaration below.                                                                                                                                                  |                      |                                                                   |                         |                                                           |  |
| <b>EXPLANATION / COMMENTS:</b>                                                                                                                                                                                                                                                                            |                      |                                                                   |                         |                                                           |  |
| Is each Customer Tool properly tagged and numbered? <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> n/a                                                                                                                                                                          |                      |                                                                   |                         |                                                           |  |
| Organization Authorized Signature<br><b>K. Ota</b>                                                                                                                                                                                                                                                        |                      |                                                                   |                         | Dated<br><b>31.Jan.'17</b>                                |  |
| Print Name<br><b>Katsuyuki Ota</b>                                                                                                                                                                                                                                                                        |                      | Phone No.<br><b>81-593-45-8216</b>                                |                         | Fax<br><b>81-593-45-8247</b>                              |  |
| Title<br><b>Components Gr. QA Dep. Deputy General Manager</b>                                                                                                                                                                                                                                             |                      | E-mail<br><b>katsuyuki-oota@gate.sws.co.jp</b>                    |                         |                                                           |  |
| <b>FOR CUSTOMER USE ONLY (IF APPLICABLE)</b>                                                                                                                                                                                                                                                              |                      |                                                                   |                         |                                                           |  |
| Part warrant disposition: <input type="radio"/> Approved <input type="radio"/> Rejected <input type="radio"/> Other                                                                                                                                                                                       |                      |                                                                   |                         |                                                           |  |
| Customer Signature                                                                                                                                                                                                                                                                                        |                      |                                                                   |                         | Dated                                                     |  |
| Print Name                                                                                                                                                                                                                                                                                                |                      | Customer tracking number (optional)                               |                         |                                                           |  |

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