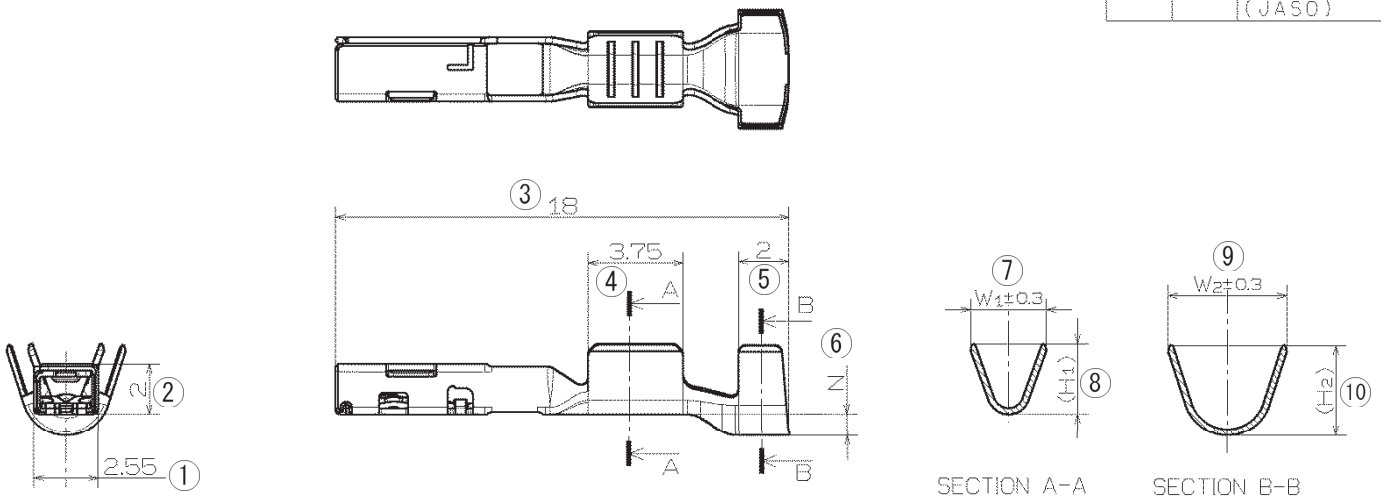
圧着部寸法
DIMENTION OF CRIMPING WING

符号 ISS.	サイズ 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 ISS.	サイズ SIZE	電線種 WIRE TYPE	電線サイズ WIRE SIZE
①	S	TXL (AWG)	22~20
		CHFUS (ISO)	0.35~0.5mm²
②	M	TXL (AWG)	18~16
		CHFUS (ISO)	0.75~1.0mm²
		AESSX (JASO)	1.25mm²



SECTION A-A　　SECTION B-B

符号 ISS.	名称 DESCRIPTION	数量 QTY	材質 MATERIAL	色相 COLOR	部品番号 PART NO.	登録名称 PART NAME
②	1.2 SEALED 2PIECES FEMALE TERMINAL M SIZE (Sn)				8240-0510	TER-WUS120FMSN
①	1.2 SEALED 2PIECES FEMALE TERMINAL S SIZE (Sn)				8240-0509	TER-WUS120FSSN

一般公差表 GENERAL TOLERANCES		
以上 OR OVER	未満 LESS THAN	
	10	±0.2
10	50	±0.3
角度 ANGLE		

材質 MATERIAL BODY : C2600R-H SPRING : C7035-EH		板厚 THICKNESS BODY : 0.25 SPRING : 0.2	
仕上 FINISH Sn PLATING		尺度 SCALE 5:1	
色相 COLOR		質量 MASS	
承認 APPROVED	検図 CHECKED	設計 DESIGNED	製図 DRAWN
'16.01.09 K.Yamashita	'16.01.09 K.Uezono	2016/01/08 Y.KITAGAWA	2016/01/08 H.KANGYU
三角法 THIRD ANGLE PROJECTION			

登録名称 PART NAME	上記参照 SEE ABOVE TABLE
管理番号 REFERENCE NO.	S 1 0 7 0 3 3 3
部品番号 PART NO.	SEE ABOVE TABLE
名称 DESCRIPTION	1.2mm防水メス端子(Sn) 1.2 SEALED 2PIECES FEMALE TERMINAL(Sn)
Sumitomo Wiring Systems, Ltd.	A3

開企 008C-9　'16/06/21

UFL166N01

V5

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 8240-0509	Date (Rev.) N／A	Title N／A
Part Name TER-WUS120FSSN	Page 1 of 15	Phone Number 81-59-382-8867

Cross Functional Team Members

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

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

Sumitomo Wiring Systems, Ltd.

Part Certification

POTENTIAL FAILURE MODE AND EFFECTS ANALYSIS

○ Design FMEA ◉ Process FMEA

○ System ○ Subsystem ◉ Component

Page	FMEA Number
1 of 15	PPAP S14-083

Part Number	Design or Process Responsibility	Prepared by	Telephone #
8240-0509	Sumitomo Wiring Systems, Ltd.	Sumitomo Wiring Systems, Ltd.	81-59-382-8867

Model Year(s) / Vehicle(s)	Key Date	Original FMEA Date	FMEA Revision Date
N/A	N/A	17.Nov.'14	N/A

Core Team

Design section(T.Hata) Engineering section(D.Hirasawa)
QA section(M.Hayakawa) Production section(T. Nakazawa)

Design Item or Process Function Requirements	Potential Failure Mode	Potential Effect(s) of Failure	Sev	Class	Potential Cause(s) / Mechanism(s) of Failure	Occ	Current Design or Process Controls	Det	RPN	Recommended Actions	Responsibility & Target Completion Date	Actions Taken	Sev	Occ	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 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 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 Periodical check	1	6	↑	↑	↑	↑	↑	↑	↑
Stamping	Dimensional problem and deformation	Lower its Function/Durability	6	↑	Not good stamping condition	1	According to operation manual 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 Control of bottom dead point	1	6	↑	↑	↑	↑	↑	↑	↑
		Lower its Function/Durability	6	↑	Broken die	1	Confirmation of check sheet of die Inspection of product	2	12	↑	↑	↑	↑	↑	↑	↑

Supplier

Sumitomo Wiring Systems, Ltd.

Part Certification

POTENTIAL FAILURE MODE AND EFFECTS ANALYSIS

○ Design FMEA ◉ Process FMEA

○ System ○ Subsystem ◉ Component

Page	FMEA Number
2 of 15	PPAP S14-083

Part Number	Design or Process Responsibility	Prepared by	Telephone #
8240-0509	Sumitomo Wiring Systems, Ltd.	Sumitomo Wiring Systems, Ltd.	81-59-382-8867

Model Year(s) / Vehicle(s)	Key Date	Original FMEA Date	FMEA Revision Date
N/A	N/A	17.Nov.'14	N/A

Core Team

Design section(T.Hata) Engineering section(D.Hirasawa)
QA section(M.Hayakawa) Production section(T. Nakazawa)

Design Item or Process Function Requirements	Potential Failure Mode	Potential Effect(s) of Failure	Sev	Class	Potential Cause(s) / Mechanism(s) of Failure	Occ	Current Design or Process Controls	Det	RPN	Recommended Actions	Responsibility & Target Completion Date	Actions Taken	Sev	Occ	Det	RPN
Final inspection	Dimensional problem and deformation	Lower its Function/Durability	6	N/A	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 Periodical check	1	6	↑	↑	↑	↑	↑	↑	↑
Packing and Shipment	Wrong quantity	N/A	2	↑	Miss confirmation of the quantity	1	According to the packing 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 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: ○ Prototype ○ Pre-Launch ◉ Production	Key Contact Name: Masahiro.Hayakawa	Date (Orig): 17.Nov.'14	Date (Rev): 0	Page: 1 of 15
Control Plan Number: PPAP S14-083	Key Contact Phone: 81-59-382-8867	Customer Engineering Approval (If Req'd): N/A		Date (If Req'd): N/A
Part Number: 8240-0509 / ECL: 3	Supplier / Plant Approval / Date: N/A	Customer Quality Approval (If Req'd): N/A		Date (If Req'd): N/A
Part Name / Description: TER-WUS120FSSN	Other supplier approval by (If Req'd): N/A	Other Approval (If Req'd): N/A		Date (If req'd): N/A
Supplier / Plant: Sumitomo Wiring Systems,Ltd. / Supplier Code: N/A	Other Approval Date (If Req'd): N/A			

Core team Members

Engineer Section D.Hirasawa Y.Hattori

QA Section M.Hayakawa K.Takahashi

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

Supplier

Sumitomo Wiring Systems, Ltd.

Part Certification

CONTROL PLAN

Control Plan Category: ○ Prototype ○ Pre-Launch ◉ Production	Key Contact Name: Masahiro.Hayakawa	Date (Orig): 17.Nov.'14	Date (Rev): 0	Page: 2 of 15
Control Plan Number: PPAP S14-083	Key Contact Phone: 81-59-382-8867	Customer Engineering Approval (If Req'd): N/A		Date (If Req'd): N/A
Part Number: 8240-0509 / ECL: 3	Supplier / Plant Approval / Date: N/A	Customer Quality Approval (If Req'd): N/A		Date (If Req'd): N/A
Part Name / Description: TER-WUS120FSSN	Other supplier approval by (If Req'd): N/A	Other Approval (If Req'd): N/A		Date (If req'd): N/A
Supplier / Plant: Sumitomo Wiring Systems,Ltd. / Supplier Code: N/A	Other Approval Date (If Req'd): N/A			

Core team Members

Engineer Section D.Hirasawa Y.Hattori

QA Section M.Hayakawa K.Takahashi

Part / Proc #	Process Name / Operation description	Machine, Device, Jig, Tools For Mfg.	Characteristics: No.	Characteristics: Product	Characteristics: Process	Special Char. Class.	Methods: Product / Process Specification / Tolerance	Methods: Evaluation / Measurement Technique	Methods: Sample Size	Methods: Sample Freq.	Methods: Control Method	Reaction Plan
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	↑	↑	↑	↑	↑	↑	↑	

Date 31.MAR.'16
Sumitomo Wiring
Systems,Ltd.

Katsuyuki Ota

Gage Repeatability and Reproduciility 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	2	9.41	9.44	9.43	9.38	9.43	9.38	9.36	9.41	9.42	9.41		9.4070
3	3	9.41	9.44	9.43	9.38	9.42	9.38	9.36	9.42	9.41	9.41		9.4060
4	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
5	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
7	2	9.38	9.42	9.37	9.41	9.45	9.41	9.38	9.41	9.43	9.40		9.4060
8	3	9.39	9.41	9.37	9.41	9.44	9.41	9.38	9.41	9.42	9.41		9.4050
9	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
10	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
12	2	9.41	9.42	9.45	9.44	9.40	9.40	9.36	9.41	9.37	9.39		9.4050
13	3	9.40	9.42	9.44	9.42	9.39	9.41	9.37	9.40	9.38	9.39		9.4020
14	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
15	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 Avarage (X p)	9.398	9.427	9.412	9.407	9.422	9.400	9.367	9.410	9.404	9.401	Xbar-bar R p	9.4048 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 for Gage R&R use
Gage Name: Calipers
Characteristics: Dimension
Gage No,: 817
Tolerance: 0.6 Units mm
Gage Type: Calipers
Tolerance (T): T= 0.6
From data sheet: Rbar-bar= 0.0087
Xbar DIFF= 0.0030
R p= 0.060

Performed by
T.Morishita
T.Saitou
T.Taniguchi

Measurement Unit Analysis

Repeatability - Equipment Variation (EV)

EV = Rbar-bar * K1
= 0.0051

Trials	K1
2	0.8862
3	0.5908

% EV= (EV*6/T) * 100
= 5.12 %

Reproducibility - Appraiser Variation (AV)

AV= SQRT((Xbar DIFF * K2)^2 - (EV^2/nr))
= 0.001260

Appraisers	2	3
K2	0.7071	0.5231

% AV= (AV*6/T) * 100
= 1.26 %

n = number of parts
r = number of trials

Repeatability & Reproducibility (R&R)

R&R= SQRT(EV^2 + AV^2)
= 0.0053

% R&R= (R&R*6/T) * 100
= 5.27 %

Part Variation (PV)

PV= R p * K3
= 0.0189

Parts	K3
2	0.7071
3	0.5231
4	0.4467
5	0.4030
6	0.3742
7	0.3534
8	0.3375
9	0.3249
10	0.3146

Gage system OK

% PV= (PV*6/T) * 100
= 18.88 %

Total Variation (TV)

TV= SQRT(R&R^2 + PV^2)
= 0.0196

ndc= 1.41(PV/GRR)
= 5

Gage discrimination acceptable

Date 31.MAR.'16
Sumitomo Wiring
Systems,Ltd.

Katsuyuki Ota

Gage Repeatability and Reproduciility 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 Avarage (X p)	9.412	9.442	9.401	9.409	9.416	9.401	9.408	9.357	9.402	9.396	Xbar-bar R p	9.4043 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
Characteristics	Dimension	Gage No,	T0026
Tolerance	0.6 Units mm	Gage Type	Projector:V24
Tolerance (T)	T= 0.6		
From data sheet	Rbar-bar= 0.0093	Xbar DIFF= 0.0060	R p= 0.086

Performed by
T.Morishita
T.Saitou
T.Taniguchi

Measurement Unit Analysis

Repeatability - Equipment Variation (EV)

EV = Rbar-bar * K1
= 0.0055

Trials	K1
2	0.8862
3	0.5908

% EV= (EV*6/T) * 100
= 5.51 %

Reproducibility - Appraiser Variation (AV)

AV= SQRT((Xbar DIFF * K2)^2 - (EV^2/nr))
= 0.0030

Appraisers	2	3
K2	0.7071	0.5231

% AV= (AV*6/T) * 100
= 2.97 %

n = number of parts
r = number of trials

Repeatability & Reproducibility (R&R)

R&R= SQRT(EV^2 + AV^2)
= 0.0063

% R&R= (R&R*6/T) * 100
= 6.26 %
Gage system OK

Part Variation (PV)

PV= R p * K3
= 0.0269

Parts	K3
2	0.7071
3	0.5231
4	0.4467
5	0.4030
6	0.3742
7	0.3534
8	0.3375
9	0.3249
10	0.3146

% PV= (PV*6/T) * 100
= 26.92 %

Total Variation (TV)

TV= SQRT(R&R^2 + PV^2)
= 0.0276

ndc= 1.41(PV/GRR)
= 6

Gage discrimination acceptable

PART INSPECTION REPORT

Suppler
SUMITOMO WIRING SYSTEMS

Part Certification

Mold:SZ1

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

Dim №	Figure Code	Drawing Dimension	Acceptance Lower	Acceptance Upper	PARTS/TOOL CAVITIES CHECKED 1	2	3	4	5	6	7	8	OK	NOT OK	
1		2.55	2.35	2.75	2.54								O		
2		2	1.8	2.2	2.00								O		
3		18	17.7	18.3	18.07								O		
4		3.75	3.55	3.95	3.75								O		
5		2	1.8	2.2	1.94								O		
6		0.75	0.55	0.95	0.74								O		
7		2.6	2.3	2.9	2.53								O		
8		(2.2)	Ref		2.20								–		
9		4.3	4.0	4.6	4.21								O		
10		(3.4)	Ref		3.33								–		
11															
12															
13															
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Inspection Source Company Name

Inspected by	Title	Inspection Report Date
H.SAKA	QA STAFF	18.Oct.'16
Inspctor Supervisor	Title	Date
Approved by K.Ota	Title Components Gr. QA Dep. Deputy General Manager	Date 18.Oct.'16

PART INSPECTION REPORT

Suppler
SUMITOMO WIRING SYSTEMS

Part Certification

Mold:SZ2

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

Dim №	Figure Code	Drawing Dimension	Acceptance Lower	Acceptance Upper	PARTS/TOOL CAVITIES CHECKED 1	2	3	4	5	6	7	8	OK	NOT OK	
1		2.55	2.35	2.75	2.51								O		
2		2	1.8	2.2	2.00								O		
3		18	17.7	18.3	18.09								O		
4		3.75	3.55	3.95	3.76								O		
5		2	1.8	2.2	1.94								O		
6		0.75	0.55	0.95	0.73								O		
7		2.6	2.3	2.9	2.64								O		
8		(2.2)	Ref		2.16								–		
9		4.3	4.0	4.6	4.20								O		
10		(3.4)	Ref		3.31								–		
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Inspection Source Company Name

Inspected by	Title	Inspection Report Date
H.SAKA	QA STAFF	18.Oct.'16
Inspctor Supervisor	Title	Date
Approved by K.Ota	Title Components Gr. QA Dep. Deputy General Manager	Date 18.Oct.'16

PART INSPECTION REPORT

Suppler
SUMITOMO WIRING SYSTEMS

Part Certification

Mold:SZ3

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

Dim №	Figure Code	Drawing Dimension	Acceptance Lower	Acceptance Upper	PARTS/TOOL CAVITIES CHECKED 1	2	3	4	5	6	7	8	OK	NOT OK	
1		2.55	2.35	2.75	2.51								O		
2		2	1.8	2.2	2.00								O		
3		18	17.7	18.3	18.10								O		
4		3.75	3.55	3.95	3.75								O		
5		2	1.8	2.2	1.94								O		
6		0.75	0.55	0.95	0.73								O		
7		2.6	2.3	2.9	2.63								O		
8		(2.2)	Ref		2.17								–		
9		4.3	4.0	4.6	4.20								O		
10		(3.4)	Ref		3.31								–		
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Inspection Source Company Name

Inspected by	Title	Inspection Report Date
H.SAKA	QA STAFF	18.Oct.'16
Inspctor Supervisor	Title	Date
Approved by K.Ota	Title Components Gr. QA Dep. Deputy General Manager	Date 18.Oct.'16

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

TYPE OF TEST	MATERIAL SPEC. NO / DATE / SPECIFICATION	SUPPLIER TEST RESULTS	OK	NOT OK
Tensile strength	Unit:n/nm^2 Spec: 410-540	485	OK	
Elongation	Unit:% Spec: -	18.0	-	
Hardness	Unit:HV Spec: 105.0-175.0	155.0	OK	

Signature	Title	Date
K. Ota	Components Gr. QA Dep. Deputy General Manager	18.Oct.'16

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

TYPE OF TEST	MATERIAL SPEC. NO / DATE / SPECIFICATION	SUPPLIER TEST RESULTS	OK	NOT OK
Tensile strength	Unit:n/nm^2 Spec: 410-540	485	OK	
Elongation	Unit:% Spec: -	18.0	-	
Hardness	Unit:HV Spec: 105.0-175.0	155.0	OK	

Signature	Title	Date
K. Ota	Components Gr. QA Dep. Deputy General Manager	18.Oct.'16

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

TYPE OF TEST	MATERIAL SPEC. NO / DATE / SPECIFICATION	SUPPLIER TEST RESULTS	OK	NOT OK
Tensile strength	Unit:n/nm^2 Spec: 410-540	485	OK	
Elongation	Unit:% Spec: -	18.0	-	
Hardness	Unit:HV Spec: 105.0-175.0	155.0	OK	

Signature	Title	Date
K. Ota	Components Gr. QA Dep. Deputy General Manager	18.Oct.'16

PERFORMANCE TEST

Supplier SUMITOMO WIRING SYSTEMS Ltd

Mold:SZ1

Part Certification

Page 1 of 1

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

REF NO.	REQUIREMENTS	TEST FREQ	QTY TESTED	SUPPLIER TEST RESULTS AND TEST CONDITIONS	OK	NOT OK
	Terminal insertion force unit:N Spec: MAX 6.5	LOT	n = 1	3.1	OK	

Signature	Title	Date
K. Ota	Components Gr. QA Dep. Deputy General Manager	18.Oct.'16

PERFORMANCE TEST

Supplier: SUMITOMO WIRING SYSTEMS Ltd

Mold:SZ2

Part Certification

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

REF NO.	REQUIREMENTS	TEST FREQ	QTY TESTED	SUPPLIER TEST RESULTS AND TEST CONDITIONS	OK	NOT OK
	Terminal insertion force unit:N Spec: MAX 6.5	LOT	n = 1	3.5	OK	

Signature	Title	Date
K. Ota	Components Gr. QA Dep. Deputy General Manager	18.Oct.'16

PERFORMANCE TEST

Supplier SUMITOMO WIRING SYSTEMS Ltd

Mold:SZ3

Part Certification

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

REF NO.	REQUIREMENTS	TEST FREQ	QTY TESTED	SUPPLIER TEST RESULTS AND TEST CONDITIONS	OK	NOT OK
	Terminal insertion force unit:N Spec: MAX 6.5	LOT	n = 1	3.6	OK	

Signature	Title	Date
K. Ota	Components Gr. QA Dep. Deputy General Manager	18.Oct.'16

18.Oct.'16
Sumitomo Wiring
Systems Ltd.

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	2.540						
n2	2.540						
n3	2.550						
n4	2.540						
n5	2.540						
n6	2.540						
n7	2.530						
n8	2.540						
n9	2.550						
n10	2.550						
n11	2.550						
n12	2.540						
n13	2.540						
n14	2.550						
n15	2.550						
n16	2.540						
n17	2.550						
n18	2.550						
n19	2.550						
n20	2.540						
n21	2.550						
n22	2.550						
n23	2.560						
n24	2.560						
n25	2.550						
n26	2.540						
n27	2.550						
n28	2.540						
n29	2.540						
n30	2.550						
x	2.550						
MAX	2.560						
MIN	2.530						
δ	0.005						
CP	13.333						
CPK	13.047						

Measurement Place

Please refer to an attached sheet drawing

18.Oct.'16
Sumitomo Wiring
Systems Ltd.

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	2.510						
n3	2.520						
n4	2.510						
n5	2.510						
n6	2.510						
n7	2.520						
n8	2.510						
n9	2.510						
n10	2.520						
n11	2.510						
n12	2.520						
n13	2.520						
n14	2.510						
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n22	2.510						
n23	2.520						
n24	2.520						
n25	2.520						
n26	2.520						
n27	2.520						
n28	2.520						
n29	2.510						
n30	2.510						
x	2.520						
MAX	2.520						
MIN	2.510						
δ	0.005						
CP	13.333						
CPK	11.000						

Measurement Place

Please refer to an attached sheet drawing

18.Oct.'16
Sumitomo Wiring
Systems Ltd.

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	2.500						
n2	2.530						
n3	2.510						
n4	2.520						
n5	2.520						
n6	2.530						
n7	2.510						
n8	2.510						
n9	2.520						
n10	2.520						
n11	2.510						
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n24	2.510						
n25	2.530						
n26	2.520						
n27	2.520						
n28	2.510						
n29	2.530						
n30	2.510						
x	2.520						
MAX	2.530						
MIN	2.500						
δ	0.005						
CP	13.333						
CPK	11.113						

Measurement Place

Please refer to an attached sheet drawing

Components Group/Testing & Validation Department

2016		
Approval	Check	Charged
M.Imamura Manager 2016/3/31	K.Motooka 2016/3/31	Y.Hanebuchi 2016/3/31

Laboratory Scope

Testing Items	Testing & Measurement Apparatus	Location: Technical Center 1F	Location: Technical Center 3F	Instruction Manual No.	machine number	Capability of Testing & Measurement Apparatus	proof inspection
Vibration test Shock test Combined stress test Vibration/Mechanical Shock	Combined stress tester	●		SCD-35AG081	17	**Table-1**: #1 Exciting Force(kgf) 3800; Amplitude(mmP-P) 56; Acceleration(m/s2) 980; Frequency(Hz) 5 to 2000; Temperature(deg. C) -40 to 200; Humidity(%RH) 30 to 98 #4 2500; 51; 940; 5 to 2500; -40 to 200; 30 to 98 #5 2000; 26; 980; 5 to 2500; -40 to 200; 30 to 98 #6 2000; 26; 980; 5 to 2500; -40 to 200; 30 to 98 #7 1400; 51; 911; 5 to 5000; -40 to 200; 30 to 98 #8 1400; 51; 911; 5～5000; -40 to 200; 30 to 98 **Table-1 (cont.)**: #13 1400; 100; 568; 5 to 2000; -40 to 200; 30 to 98 #17 2500; 60; 756; 5 to 2000; -40 to 200; 30 to 98 #18 3823; 56; 980; 5 to 2000; -40 to 200; 30 to 98 #19 2450; 51; 1142; 5 to 2500; -60 to 180; 30 to 98 #20 2651; 60; 963; DC to 2500; -40 to 200; 30 to 98 **Table-1 (cont.)**: #21 2500; 60; 963; 5 to 2500; -40 to 200; 30 to 98 #22 2500; 60; 963; 5 to 2500; -40 to 200; 30 to 98 #23 2500; 51; 1142; 5 to 2600; -60 to 180; 30 to 98 #24 2500; 51; 1142; 5 to 2600; -60 to 180; 30 to 98 #25 2447; 51; 1142; 5 to 2600; -60 to 180; 30 to 98 #26 4500; 51; 1000; 5 to 2800; -45 to 180; 30 to 98	OK
Salt water spray	Combined corrosion tester	●		SCD-35AG071	4	**Table-2**: #1 ～35℃; #2 ～35℃; #3 ～50℃ 1～2ml; #4 Max60℃ — Temperature(deg. C) spray rate 1ml	OK
Thermal shock test	Thermal Shock chamber	●		SCD-35AG072	13	**Table-3**: #1 -70; 200 #2 -65; 200 #4 -65; 200 #8 -70; 200 #9 -70; 200 #10 -70; 200 **Table-3 (cont.)**: #11 -70; 200 #12 -70; 200 #13 -70; 200 #14 -70; 200 #15 -70; 200 #16 -70; 200 #17 -70; 200 Temp. Low(deg. C) Temp. High(deg. C)	OK
Dewing test	Thermal Shock with Humidity chamber	●		SCD-35AG094	3	**Table-4**: #1 Temp. Low(deg. C) -55; Temp. High(deg. C) 200; Humidity(%RH) to 95 #2 -55; 200; to 95 #3 -55; 200; to 95	OK
Water resistance	Water spray tester	●		SCD-35AG072	2	Temp. range : ambient temp. to 150deg. C JIS D0203 R1(1.9L/min)・R2(3.2L/min) JIS D0203 S1(24.5L/min)・S2(39.2L/min)	OK
Humidity resistance test Temperature/humidity cycling test Low temperature test	Temperature & Humidity Chamber	●		SCD-35AG037	13	**Table-5**: #3 Temp. Low(deg. C) -70; Temp. High(deg. C) 180; Humidity(%RH) 20～98 #4 -70; 180; 20～98 #5 -70; 150; 20～98 #6 -70; 150; 20～98 #7 -70; 180; 30～98 #8 -70; 150; 20～98 #9 -70; 150; 20～98 #10 -70; 150; 20～98 **Table-5 (cont.)**: #11 -70; 150; 20～98 #12 -70; 150; 20～98 #13 -70; 150; 30～95 #14 -70; 150; 30～95 #15 -70; 150; 30～95	OK
Oil resistance test Fluid Resistance	Oil bath	●		SCD-35AG106	2	Max. 150deg. C(Aging oven : Max. 200deg. C)	OK
Over current test Temperature rise Current cycle test Maximum Test Current Capability Terminal 1008 Hour Current Cycling	Windless and High Temperature Chamber Power supply recorder thermocouple		●	SCD-35AG078	15	Max. 160deg. C Max. 500A	OK

Testing Items	Testing & Measurement Apparatus	Location: Technical Center 1F	Location: Technical Center 3F	Instruction Manual No.	machine number	Capability of Testing & Measurement Apparatus	proof inspection
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 Table Reversal formula(angle 0～180) Nozzle angle 0, 30, 60, 90 Pressure MIN[Water pressure5Mpa→11.9L/min]:MAX[Water pressure10Mpa→16.3L/min] ϕ Nozzle toSample 100mm (Width8mm、Vertical injection angle30) 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 SO2 : Max. 500ppm H2S : Max. 0. 1ppm NO2 : Max. 0. 2ppm CL2 : Max. 0. 02ppm	OK
Dust resistance	Dust chamber	●		SCD-35AG123	1	blowing interval: 1 to 30sec. 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) Concentration:10%	OK
Fretting Corrosion	Fretting Corrosion Testing machine		●	SCD-35AG156	1	Temperature in a tank : normal temperature to 100℃ Movement frequency : 1 to 10Hz 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 Terminal crimping force Terminal retention force Housing locking force Housing lock release force Twisting durability test Terminal strength Terminal to Terminal Engage/Disengage Force Terminal-Connector Insertion/Extraction Force Connector-Connector Mating/Unmating	Tensile & Comp. Tester/Push-Pull Tester		●	SCD-35AG063	2	Tensile & Comp. Tester speed(mm/min) 1 to 1000 load(N) 5,000	OK
					5	Push-Pull tester speed(mm/min) 20,50,100,200 load(N) 500	OK
Voltage drop 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 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

CONTROL. NO. :

DATE : 7/SEP/2007

APPROVED	VERIFIED	PREPARED
S. Fujiwara	H. Honda	Y. Obata

MATERIAL SAFETY DATA SHEET

Product name	C2600 Tin Plated	Application		Water release: 1. necessary to treat (2) None
Manufacturer	DOWA METAL CO.,LTD		PHONE 001-81-539-62-3131 FAX 001-81-539-62-3996	
Address	767 Matsunokijima , Iwata-shi, Shizuoka Prefecture, Japan			
Bussiness Office	DOWA METALTECH CO.,LTD Metal Processing Business Unit		PHONE 001-81-3-6847-1251 FAX 001-81-3-6847-1261	
Address	14-1 4-Chome Sotokanda ,Chiyoda District, Tokyo, Japan			

COMPOSITION		HARM TO HEALTH			
Chemical element	wt.%	Threshold concentration	LD50	Skin Irritation	Carcinogenicity
Cu	69.53				
Pb	0.01>				
Fe	0.02>				
Sn	0.42				
Zn	Remainder				
As product	100				

FIRE AND EXPLOSION HAZARD

1.Flammable or explosible.
2.Pyrophoric or exothermic when contacting( )
3.With fear of splitting.
4.Dust explosible.
5.Others( )
(6).No hazard.

TOXICOLOGY

1.Skin is inflated if contacting with.
2.Skin is injured if contacting with.
3.Eyes are irritated if contacting with.
(4).Eyesight may lose if contacting with
5.Inhalation results Irritation to the throat, upper respiratory tract.
6.Inhalation causes headache, vertigo.
7.Anesthesia may be caused by inhalation.
8.Poison is caused by inhalation.
9. Poison is caused by drinking.
10.Others( )
11.No harm.

CONCERNED LAWS(including the regulations issued by the Ministry of Labor)

The law of labor safety and health
1.The regulation for preventing the poison of organic resolvent, the( )categories. Name of material( )
2.The regulation for preventing defect from specified chemical materials. The( )kind. Name of material( )
3.Regulation for preventing lead poison.
4.No.477 regulation issued by The Ministry of Labor in 1976, titled preventing health defect from stiffener of epoxy resin.
5.No.60 notification issued by The Ministry of Labor in 1992 titled guideline for indication of the hazard and harems of chemical materials.
6.Other Regulations, notifications. ( )
(7).No concerned.

Fire Law
1.The ( ) category hazard substance, name ( ) category.
Property(non-aqueous, aqueous)※the registration number of date base( )
2.Specified combustible substance, name ( ) category.
3.Other( )
(4).No concerned.

Other laws

1.The law of control on high pressure gas.

2.Specifically controlled industrial waste defined in the law of waste disposal.

[a. Waste oil b. Waste alkali c. Waste acid d. Others( )]

3.The law of control on poisonous and drastic substances.

[a. Poisonous substance b. Drastic substance(composition( ))]

(4.)Others ( ) 5.No concerned.

PHYSICAL PROPERTIES

Specific gravity	8.53	Melting point	955℃	boiling point	—	flaming point	—
Igniting point	—	Vapor density	—	explosion range	—	pH	—

SHAPE: 1.Liquid 2.Gas(pressure) 3.Powder(particle size) (4.)Solid 5.Others( )

PRECAUTIONS FOR HANDLING

1.Handle in well ventilated places. (2.)Use protective equipment. [(a.)Gloves b. Apron c. Mask d. Glasses e. Others( )] 3.Run local ventilation fan

4.Fire prohibited 5.Water prohibited.

6.Avoid collisions 7.Use protective cream.

8.Others( ) 9.None.

PRECAUTIONS FOR HANDLING

1.Ventilate. 2.Avoid storing together with other substances.

3.Set lightning rod. 4.Store at cool places.

5.Store at cool and dark places. 6.Lock up.

7.Avoid direct sunlight. 8.Fear of auto ignition.

(9.)Others.(keep away from acid and alkali substance 10.None.

FIRE FIGHTING

1.Fear of generation of harmful gas. ( ) 2.Fear of explosion.

3.Pouring water prohibited. 4.Others.( )

5.Extinguishing media[a.Water b. Carbonic acid gas c. Powder extinguisher]

[d. Bubble extinguisher e. Water spray f. Earth and sand]

[g. Others( )]

(6.)None.

SPILL AND LEAKAGE PROCEDURES

1. Absorb with[a. Waste cloth b. Dry sand c. Sawdust d. Others( )]

2.Collect with vacuum. 3.Neutralize with( )

4.Fire prohibited. 5.Avoid pouring water.

6.Handle with care because of harm. 7.Others. ( )

(8.)None.

FIRST AID

1.On occasion adhering to the body

[a. Wash with water b. Wash with soap c. Others( ) (d.)Nothing necessary]

2.On occasion adhering eyes

[a. Flush eyes for( )minutes (b.) Others(call physician) c. Nothing necessary]

3. On occasion being drunk

[a. Spit out b. Do not spit out c. Rinse the mouth (d.) Others(call physician)]

[e. Nothing necessary]

4. On occasion being inhaled

[a. Move to fresh air and rest b. Keep warm (c.) Others(call physician)]

[e. Nothing necessary]

WASTE DISPOSE

1. Send to waste treatment clearer [a. Burn b. Neutralize with( ) c. Others( )]

2.Drainage treatment(condense and sediment·treat biologically)

3.Return to the manufacturer.

(4.)May be recycled.

5.Others( )

PART SUBMISSION WARRANT

DAIMLERCHRYSLER Ford GM

Part Name: TER-WUS120FSSN			Cust. Part Number:
Shown on Drawing No.: S- 107033			Org. Part Number: 8240-0509
Engineering Drawing Change Level: 3			Dated: 09.Jan.'16
Additional Engineering Changes: N/A			Dated: N/A
Safety and/or Government Regulation: ○ Yes ◉ No	Purchase Order No.: N/A		Weight: 0.0002 kg
Checking Aid No.: N/A	Checking Aid Engineering Change Level: N/A		Dated: N/A

ORGANIZATION MANUFACTURING INFORMATION				CUSTOMER SUBMITTAL INFORMATION
Organization Name & Supplier: Sumitomo Wiring Systems,Ltd	Vendor Code: N/A			Customer Name/Division:
Street Address: 2-SHOSEN-CHO				Buyer/Buyer Code:
City: Yokkaichi	Region: Mie	Postal Code: 510-0867	Country: Japan	Application:

MATERIALS REPORTING

Has customer-required Substances of Concern information been reported? ◉ Yes ○ No ○ n/a

Submitted by IMDS or other customer format: IMDS ID 481317658

Are polymeric parts identified with appropriate ISO marking codes? ○ Yes ○ No ◉ **n/a**

REASON FOR SUBMISSION (Check at least one)

- ◉ Initial Submission
- ○ Engineering Change(s)
- ○ Tooling: Transfer, Replacement, Refurbishment, or additional
- ○ Correction of Discrepancy
- ○ Tooling Inactive >than 1 Year
- ○ Change to Optional Construction or Material
- ○ Sub-Supplier or Material Source Change
- ○ Change in Part Processing
- ○ Parts Produced at Additional Location
- ☐ Other - please specify

REQUESTED SUBMISSION LEVEL (Check one)

- ○ Level 1 - Warrant only (and for designated appearance items, an Appearance Approval Report) submitted to customer
- ○ Level 2 - Warrant with product samples and limited supporting data submitted to customer
- ◉ Level 3 - warrant with product samples and complete supporting data submitted to customer
- ○ Level 4 - Warrant and other requirements as defined by customer
- ○ Level 5 - Warrant with product samples and complete supporting data reviewed at supplier's manufacturing location.

SUBMISSION RESULTS

The results for ☑ dimensional measurements ☑ material and functional tests ☐ appearance criteria ☐ statistical process package

These results meet all drawing and specification requirements: ◉ Yes ○ No (If "NO" - Explanation Required)

Mold/cavity/Production Process: Mold: SZ1 Cavity: 1(SZ1) Production Process: Stamping

DECLARATION

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 153,600 / 8 hours*.
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.

EXPLANATION / COMMENTS:

Is each Customer Tool properly tagged and numbered? ○ Yes ○ No ○ n/a

Organization Authorized Signature: K. Ota	Dated: 18.Oct.'16	
Print Name: Katsuyuki Ota	Phone No.: 81-593-45-8216	Fax: 81-593-45-8247
Title: Components Gr. QA Dep. Deputy General Manager	E-mail: katsuyuki-oota@gate.sws.co.jp	

FOR CUSTOMER USE ONLY (IF APPLICABLE)

Part warrant disposition: ○ Approved ○ Rejected ○ Other

Customer Signature	Dated	
Print Name	Customer tracking number (optional)	

PART SUBMISSION WARRANT

DAIMLERCHRYSLER Ford GM

Part Name: TER-WUS120FSSN			Cust. Part Number:
Shown on Drawing No.: S- 107033			Org. Part Number: 8240-0509
Engineering Drawing Change Level: 3			Dated: 09.Jan.'16
Additional Engineering Changes: N/A			Dated: N/A
Safety and/or Government Regulation: ○ Yes ◉ No	Purchase Order No.: N/A		Weight: 0.0002 kg
Checking Aid No.: N/A	Checking Aid Engineering Change Level: N/A		Dated: N/A

ORGANIZATION MANUFACTURING INFORMATION				CUSTOMER SUBMITTAL INFORMATION
Organization Name & Supplier: Sumitomo Wiring Systems,Ltd	Vendor Code: N/A			Customer Name/Division:
Street Address: 2-SHOSEN-CHO				Buyer/Buyer Code:
City: Yokkaichi	Region: Mie	Postal Code: 510-0867	Country: Japan	Application:

MATERIALS REPORTING

Has customer-required Substances of Concern information been reported? ◉ Yes ○ No ○ n/a

Submitted by IMDS or other customer format: IMDS ID 481317658

Are polymeric parts identified with appropriate ISO marking codes? ○ Yes ○ No ◉ **n/a**

REASON FOR SUBMISSION (Check at least one)

- ◉ Initial Submission
- ○ Engineering Change(s)
- ○ Tooling: Transfer, Replacement, Refurbishment, or additional
- ○ Correction of Discrepancy
- ○ Tooling Inactive >than 1 Year
- ○ Change to Optional Construction or Material
- ○ Sub-Supplier or Material Source Change
- ○ Change in Part Processing
- ○ Parts Produced at Additional Location
- ☐ Other - please specify

REQUESTED SUBMISSION LEVEL (Check one)

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- ◉ Level 3 - warrant with product samples and complete supporting data submitted to customer
- ○ Level 4 - Warrant and other requirements as defined by customer
- ○ Level 5 - Warrant with product samples and complete supporting data reviewed at supplier's manufacturing location.

SUBMISSION RESULTS

The results for ☑ dimensional measurements ☑ material and functional tests ☐ appearance criteria ☐ statistical process package

These results meet all drawing and specification requirements: ◉ Yes ○ No (If "NO" - Explanation Required)

Mold/cavity/Production Process: Mold: SZ2 Cavity: 1(SZ2) Production Process: Stamping

DECLARATION

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 153,600 / 8 hours*.
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.

EXPLANATION / COMMENTS:

Is each Customer Tool properly tagged and numbered? ○ Yes ○ No ○ n/a

Organization Authorized Signature: K. Ota	Dated: 18.Oct.'16	
Print Name: Katsuyuki Ota	Phone No.: 81-593-45-8216	Fax: 81-593-45-8247
Title: Components Gr. QA Dep. Deputy General Manager	E-mail: katsuyuki-oota@gate.sws.co.jp	

FOR CUSTOMER USE ONLY (IF APPLICABLE)

Part warrant disposition: ○ Approved ○ Rejected ○ Other

Customer Signature	Dated
Print Name	Customer tracking number (optional)

PART SUBMISSION WARRANT

DAIMLERCHRYSLER Ford GM

Part Name: TER-WUS120FSSN			Cust. Part Number:
Shown on Drawing No.: S- 107033			Org. Part Number: 8240-0509
Engineering Drawing Change Level: 3			Dated: 09.Jan.'16
Additional Engineering Changes: N/A			Dated: N/A
Safety and/or Government Regulation: ○ Yes ◉ No	Purchase Order No.: N/A		Weight: 0.0002 kg
Checking Aid No.: N/A	Checking Aid Engineering Change Level: N/A		Dated: N/A

ORGANIZATION MANUFACTURING INFORMATION				CUSTOMER SUBMITTAL INFORMATION
Organization Name & Supplier: Sumitomo Wiring Systems,Ltd	Vendor Code: N/A			Customer Name/Division:
Street Address: 2-SHOSEN-CHO				Buyer/Buyer Code:
City: Yokkaichi	Region: Mie	Postal Code: 510-0867	Country: Japan	Application:

MATERIALS REPORTING

Has customer-required Substances of Concern information been reported? ◉ Yes ○ No ○ n/a

Submitted by IMDS or other customer format: IMDS ID 481317658

Are polymeric parts identified with appropriate ISO marking codes? ○ Yes ○ No ◉ **n/a**

REASON FOR SUBMISSION (Check at least one)

- ◉ Initial Submission
- ○ Engineering Change(s)
- ○ Tooling: Transfer, Replacement, Refurbishment, or additional
- ○ Correction of Discrepancy
- ○ Tooling Inactive >than 1 Year
- ○ Change to Optional Construction or Material
- ○ Sub-Supplier or Material Source Change
- ○ Change in Part Processing
- ○ Parts Produced at Additional Location
- ☐ Other - please specify

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- ○ Level 5 - Warrant with product samples and complete supporting data reviewed at supplier's manufacturing location.

SUBMISSION RESULTS

The results for ☑ dimensional measurements ☑ material and functional tests ☐ appearance criteria ☐ statistical process package

These results meet all drawing and specification requirements: ◉ Yes ○ No (If "NO" - Explanation Required)

Mold/cavity/Production Process: Mold: SZ3 Cavity: 1(SZ3) Production Process: Stamping

DECLARATION

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 153,600 / 8 hours*.
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.

EXPLANATION / COMMENTS:

Is each Customer Tool properly tagged and numbered? ○ Yes ○ No ○ n/a

Organization Authorized Signature: K. Ota	Dated: 18.Oct.'16	
Print Name: Katsuyuki Ota	Phone No.: 81-593-45-8216	Fax: 81-593-45-8247
Title: Components Gr. QA Dep. Deputy General Manager	E-mail: katsuyuki-oota@gate.sws.co.jp	

FOR CUSTOMER USE ONLY (IF APPLICABLE)

Part warrant disposition: ○ Approved ○ Rejected ○ Other

Customer Signature	Dated	
Print Name	Customer tracking number (optional)	