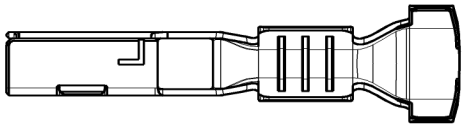
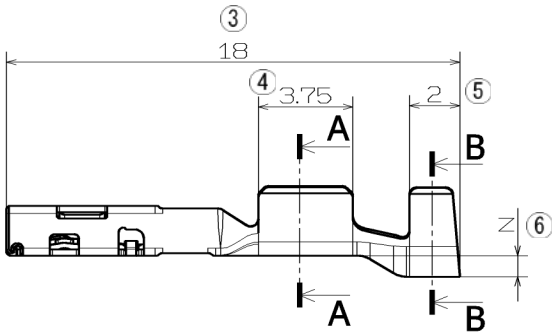
圧着部寸法
DIMENTION OF CRIMPING WING

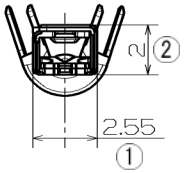
符号 ISS.	サイズ SIZE	H1	H2	W1	W2	N
①	S	(2.2)	(3.4)	2.6	4.3	0.75
②	M	(2.8)	(4.0)	3.0	4.95	0.85
③	S2	(2.2)	(3.8)	2.6	4.7	0.85

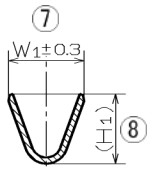
適用電線表
APPLICABLE WIRE SIZE

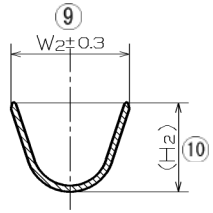
符号 ISS.	サイズ SIZE	電線種 WIRE TYPE	電線サイズ WIRE SIZE
①	S	TXL (AWG)	22~20
		CHFUS (ISO)	0.35~0.5mm²
②	M	TXL (AWG)	18~16
		CHFUS (ISO)	0.75~1.0mm²
		AESSX (JASO)	1.25mm²
③	S2	TXL (AWG)	22~20
		CHFUS (ISO)	0.35~0.5mm²











SECTION A-A

SECTION B-B

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
③	1.2 SEALED 2PIECES FEMALE TERMINAL S2 SIZE (Sn)				8240-0680	TER-WUS120FSSN2
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	板厚 THICKNESS
BODY : C2600R-H SPRING : C7035-EH	BODY : 0.25 SPRING : 0.2
仕上 FINISH	尺度 SCALE
Sn PLATING	5:1
色相 COLOR	質量 MASS

承認 APPROVED	検図 CHECKED	設計 DESIGNED	製図 DRAWN
'17.11.30 Y.Imai	'17.11.30 K.Kayano	2017/11/29 K.IGARASHI	2017/11/29 K.IGARASHI

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 A 5
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

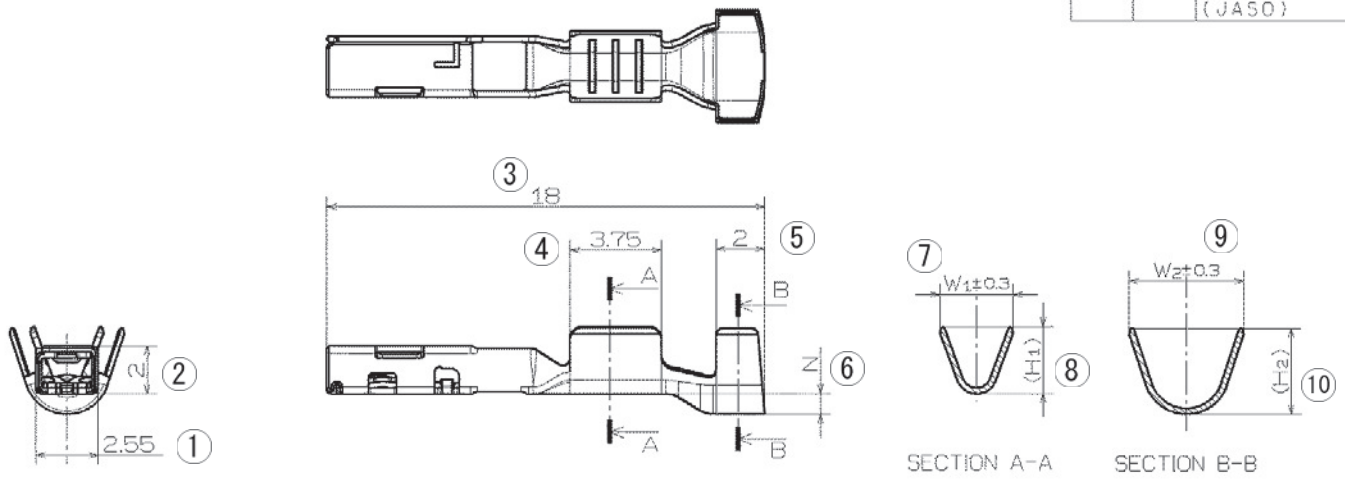
UFL166N01 20171129-145710 V5

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

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

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	

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		

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-107033 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

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 8240-0510	Date (Rev.) N／A	Title N／A
Part Name TER-WUS120FMSN	Page	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

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 S14-084		Key Contact Phone: 81-59-382-8867	Customer Engineering Approval (If Req'd): N/A		Date (If Req'd): N/A
Part Number: 8240-0510	ECL: 5	Supplier / Plant Approval / Date: N/A	Customer Quality Approval (If Req'd): N/A		Date (If Req'd): N/A
Part Name / Description: TER-WUS120FMSN		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
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 S14-084		Key Contact Phone: 81-59-382-8867	Customer Engineering Approval (If Req'd): N/A		Date (If Req'd): N/A
Part Number: 8240-0510	ECL: 5	Supplier / Plant Approval / Date: N/A	Customer Quality Approval (If Req'd): N/A		Date (If Req'd): N/A
Part Name / Description: TER-WUS120FMSN		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	N/A	N/A	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 05.Apr.'18
Sumitomo Wiring
Systems,Ltd.

Tomonori Okazaki

Gage Repeatability and Reproduciility Data Sheet (Calipers)

Appraiser / Trial #		1	2	3	4	5	6	7	8	9	10	AVERAGE	
1	A 1	17.22	17.23	17.22	17.22	17.22	17.22	17.22	17.23	17.22	17.22		17.2220
2	2	17.22	17.22	17.22	17.22	17.22	17.23	17.22	17.23	17.22	17.22		17.2220
3	3	17.22	17.22	17.22	17.22	17.22	17.22	17.22	17.23	17.22	17.22		17.2210
4	Avarage	17.220	17.223	17.220	17.220	17.220	17.223	17.220	17.230	17.220	17.220	Xbar A	17.2217
5	Range	0.000	0.010	0.000	0.000	0.000	0.010	0.000	0.000	0.000	0.000	Rbar A	0.0020
6	B 1	17.21	17.22	17.22	17.23	17.22	17.24	17.22	17.23	17.21	17.23		17.2230
7	2	17.21	17.22	17.22	17.23	17.22	17.24	17.22	17.23	17.21	17.23		17.2230
8	3	17.21	17.22	17.23	17.23	17.22	17.23	17.22	17.23	17.21	17.23		17.2230
9	Avarage	17.210	17.220	17.223	17.230	17.220	17.237	17.220	17.230	17.210	9.40	Xbar B	17.2230
10	Range	0.000	0.000	0.010	0.000	0.000	0.010	0.000	0.000	0.000	0.000	Rbar B	0.0020
11	C 1	17.23	17.21	17.23	17.23	17.23	17.23	17.22	17.22	17.21	17.22		17.2230
12	2	17.23	17.21	17.23	17.23	17.23	17.22	17.22	17.22	17.21	17.22		17.2220
13	3	17.23	17.21	17.23	17.22	17.23	17.23	17.22	17.22	17.21	17.22		17.2220
14	Avarage	17.230	17.210	17.230	17.227	17.230	17.227	17.220	17.220	17.210	17.220	Xbar C	17.2223
15	Range	0.000	0.000	0.000	0.010	0.000	0.010	0.000	0.000	0.000	0.000	Rbar C	0.0020
16	Part Avarage (X p)	17.220	17.218	17.224	17.226	17.223	17.229	17.220	17.227	17.213	17.223	Xbar-bar R p	17.2223 0.0156
17	(Rbar A + Rbar B + Rbar C)/(# of Appraisers = 3)											Rbar-bar	0.0020
18	(Max Xbar)-(Min Xbar) = Xbar DIFF												0.0013
19	(R bar-bar)*(D4=2.58)=UCL R												0.01
20	(R bar-bar)*(D3=0.00)=LCL R												0.00

Gage Repeatability and Reproducibility Report

Date 05.Apr.'18

Part No,and Name	Measurement sample for Gage R&R use	Gage Name	Calipers		Performed by
Characteristics	Dimension	Gage No,	YA1C1004		Matsubayashi
Tolerance	0.5 Units mm	Gage Type	Calipers		Sugino
Tolerance (T)	T= 0.5				Hirata
From data sheet	Rbar-bar= 0.0020	Xbar DIFF=	0.0013	R p= 0.016	

Measurement Unit Analysis

Repeatability - Equipment Variation (EV)

EV = Rbar-bar * K1
= 0.0012

Trials	K1
2	0.8862
3	0.5908

% EV= (EV*6/T) * 100
= 1.42 %

Reproducibility - Appraiser Variation (AV)

AV= SQRT((Xbar DIFF * K2)^2 - (EV^2/nr))
= 0.000663

Appraisers	2	3
K2	0.7071	0.5231

% AV= (AV*6/T) * 100
= 0.80 %

n = number of parts
r = number of trials

Repeatability & Reproducibility (R&R)

R&R= SQRT(EV^2 + AV^2)
= 0.0014

% R&R= (R&R*6/T) * 100
= 1.63 %

Gage system OK

Part Variation (PV)

PV= R p * K3
= 0.0049

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
= 5.87 %

Total Variation (TV)

TV= SQRT(R&R^2 + PV^2)
= 0.0051

ndc= 1.41(PV/GRR)
= 5

Gage discrimination acceptable

Date 05.Apr.'18
Sumitomo Wiring
Systems,Ltd.

Tomonori Okazaki

Gage Repeatability and Reproduciility Data Sheet (Projector)

Appraiser / Trial #		1	2	3	4	5	6	7	8	9	10	AVERAGE	
1	A 1	21.74	21.76	21.74	21.74	21.73	21.75	21.74	21.74	21.74	21.75		21.7430
2	2	21.74	21.76	21.75	21.74	21.73	21.75	21.74	21.74	21.74	21.75		21.7440
3	3	21.74	21.76	21.75	21.74	21.73	21.76	21.75	21.74	21.74	21.75		21.7460
4	Avarage	21.740	21.760	21.747	21.740	21.730	21.753	21.743	21.740	21.740	21.750	Xbar A	21.7443
5	Range	0.000	0.000	0.010	0.000	0.000	0.010	0.010	0.000	0.000	0.000	Rbar A	0.0030
6	B 1	21.75	21.75	21.74	21.75	21.74	21.75	21.74	21.75	21.74	21.75		21.7460
7	2	21.75	21.75	21.74	21.74	21.74	21.75	21.74	21.75	21.74	21.75		21.7450
8	3	21.74	21.75	21.74	21.74	21.74	21.75	21.74	21.75	21.73	21.74		21.7420
9	Avarage	21.747	21.750	21.740	21.743	21.740	21.750	21.740	21.750	21.737	21.747	Xbar B	21.7443
10	Range	0.010	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.010	0.010	Rbar B	0.0040
11	C 1	21.74	21.76	21.75	21.74	21.74	21.74	21.75	21.73	21.73	21.75		21.7430
12	2	21.74	21.76	21.75	21.74	21.74	21.75	21.75	21.73	21.72	21.75		21.7430
13	3	21.74	21.76	21.75	21.74	21.74	21.74	21.75	21.73	21.73	21.75		21.7430
14	Avarage	21.740	21.760	21.750	21.740	21.740	21.743	21.750	21.730	21.727	21.750	Xbar C	21.7430
15	Range	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.010	0.000	Rbar C	0.0020
16	Part Avarage (X p)	21.742	21.757	21.746	21.741	21.737	21.749	21.744	21.740	21.734	21.749	Xbar-bar R p	21.7439 0.0222
17	(Rbar A + Rbar B + Rbar C)/(# of Appraisers = 3)											Rbar-bar	0.0030
18	(Max Xbar)-(Min Xbar) = Xbar DIFF												0.0013
19	(R bar-bar)*(D4=2.58)=UCL R												0.01
20	(R bar-bar)*(D3=0.00)=LCL R												0.00

Gage Repeatability and Reproducibility Report

Date 05.Apr.'18

Part No,and Name	Measurement sample for Gage R&R use	Gage Name	Projector		Performed by
Characteristics	Dimension	Gage No,	YA1H0028		Saitou
Tolerance	0.4 Units mm	Gage Type	Projector		Katou
Tolerance (T)	T= 0.4				Taniguchi
From data sheet	Rbar-bar= 0.0030	Xbar DIFF=	0.0013	R p= 0.022	

Measurement Unit Analysis

Repeatability - Equipment Variation (EV)

EV = Rbar-bar * K1
= 0.0018

Trials	K1
2	0.8862
3	0.5908

Reproducibility - Appraiser Variation (AV)

AV= SQRT((Xbar DIFF * K2)^2 - (EV^2/nr))
= 0.0006

Appraisers	2	3
K2	0.7071	0.5231

Repeatability & Reproducibility (R&R)

R&R= SQRT(EV^2 + AV^2)
= 0.0019

Part Variation (PV)

PV= R p * K3
= 0.0070

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

Total Variation (TV)

TV= SQRT(R&R^2 + PV^2)
= 0.0072

Based on the TOLERANCE Method

% EV= (EV*6/T) * 100
= 2.66 %

% AV= (AV*6/T) * 100
= 0.93 %

n = number of parts
r = number of trials

% R&R= (R&R*6/T) * 100
= 2.82 %

Gage system OK

% PV= (PV*6/T) * 100
= 10.49 %

ndc= 1.41(PV/GRR)
= 5

Gage discrimination acceptable

PART INSPECTION REPORT

Suppler
SUMITOMO WIRING SYSTEMS

Part Certification

Mold:SZ2

Part Number	ECL	Part Name
8240-0510	5	TER-WUS120FMSN

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	2.52								O		
2		2	1.8	2.2	1.98								O		
3		18	17.7	18.3	18.11								O		
4		3.75	3.55	3.95	3.80								O		
5		2	1.8	2.2	1.96								O		
6		0.85	0.65	1.05	0.84								O		
7		3.0	2.7	3.3	3.01								O		
8		(2.8)	Ref		2.79								–		
9		4.95	4.65	5.25	4.88								O		
10		(4.0)	Ref		3.97								–		
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Inspection Source Company Name

Inspected by	Title	Inspection Report Date
Y.Hattori	QA STAFF	19.Nov.'18
Inspctor Supervisor	Title	Date
Approved by *T. Okazaki*	Title Components Gr. QA Dep. Manager	Date 19.Nov.'18

PART INSPECTION REPORT

Suppler
SUMITOMO WIRING SYSTEMS

Part Certification

Mold:SZ3

Part Number	ECL	Part Name
8240-0510	5	TER-WUS120FMSN

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	1.98								O		
3		18	17.7	18.3	18.13								O		
4		3.75	3.55	3.95	3.75								O		
5		2	1.8	2.2	2.02								O		
6		0.85	0.65	1.05	0.83								O		
7		3.0	2.7	3.3	2.99								O		
8		(2.8)	Ref		2.85								–		
9		4.95	4.65	5.25	4.86								O		
10		(4.0)	Ref		4.03								–		
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Inspection Source Company Name

Inspected by	Title	Inspection Report Date
Y.Hattori	QA STAFF	19.Nov.'18
Inspctor Supervisor	Title	Date
Approved by *T. Okazaki*	Title Components Gr. QA Dep. Manager	Date 19.Nov.'18

PART INSPECTION REPORT

Suppler
SUMITOMO WIRING SYSTEMS

Part Certification

Mold:SZ4

Part Number	ECL	Part Name
8240-0510	5	TER-WUS120FMSN

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	2.53								O		
2		2	1.8	2.2	2.00								O		
3		18	17.7	18.3	18.11								O		
4		3.75	3.55	3.95	3.75								O		
5		2	1.8	2.2	2.01								O		
6		0.85	0.65	1.05	0.82								O		
7		3.0	2.7	3.3	2.98								O		
8		(2.8)	Ref		2.81								–		
9		4.95	4.65	5.25	4.85								O		
10		(4.0)	Ref		3.98								–		
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Inspection Source Company Name

Inspected by	Title	Inspection Report Date
Y.Hattori	QA STAFF	19.Nov.'18
Inspctor Supervisor	Title	Date
Approved by *T. Okazaki*	Title Components Gr. QA Dep. Manager	Date 19.Nov.'18

PART INSPECTION REPORT

Suppler

SUMITOMO WIRING SYSTEMS

Part Certification

Mold:SZ5

Part Number	ECL	Part Name
8240-0510	5	TER-WUS120FMSN

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	2.53								O		
2		2	1.8	2.2	1.98								O		
3		18	17.7	18.3	18.09								O		
4		3.75	3.55	3.95	3.74								O		
5		2	1.8	2.2	1.98								O		
6		0.85	0.65	1.05	0.83								O		
7		3.0	2.7	3.3	2.96								O		
8		(2.8)	Ref		2.85								–		
9		4.95	4.65	5.25	4.82								O		
10		(4.0)	Ref		4.03								–		
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Inspection Source Company Name

Inspected by	Title	Inspection Report Date
Y.Hattori	QA STAFF	19.Nov.'18
Inspctor Supervisor	Title	Date
Approved by *T. Okazaki*	Title Components Gr. QA Dep. Manager	Date 19.Nov.'18

MATERIAL TEST RESULTS

Supplier
Part Certification

SUMITOMO WIRING SYSTEMS Ltd.

Mold:SZ2

Supplier	Part Number
SUMITOMO WIRING SYSTEMS Ltd.	8240-0510
Name of Laboratory	Part Name
SUMITOMO WIRING SYSTEMS Ltd.	TER-WUS120FMSN

TYPE OF TEST	MATERIAL SPEC. NO / DATE / SPECIFICATION	SUPPLIER TEST RESULTS	OK	NOT OK
Tensile strength	Unit:N/mm^2 Spec: 410-540	462	OK	
Hardness	Unit:HV Spec: 105.0-175.0	158.0	OK	

Signature	Title	Date
T. Okazaki	Components Gr. QA Dep. Manager	19.Nov.'18

MATERIAL TEST RESULTS

Supplier
Part Certification

SUMITOMO WIRING SYSTEMS Ltd.

Mold:SZ3

Supplier	Part Number
SUMITOMO WIRING SYSTEMS Ltd.	8240-0510
Name of Laboratory	Part Name
SUMITOMO WIRING SYSTEMS Ltd.	TER-WUS120FMSN

TYPE OF TEST	MATERIAL SPEC. NO / DATE / SPECIFICATION	SUPPLIER TEST RESULTS	OK	NOT OK
Tensile strength	Unit:N/mm^2 Spec: 410-540	462	OK	
Hardness	Unit:HV Spec: 105.0-175.0	158.0	OK	

Signature	Title	Date
T. Okazaki	Components Gr. QA Dep. Manager	19.Nov.'18

MATERIAL TEST RESULTS

Supplier
Part Certification

SUMITOMO WIRING SYSTEMS Ltd.

Mold:SZ4

Supplier	Part Number
SUMITOMO WIRING SYSTEMS Ltd.	8240-0510
Name of Laboratory	Part Name
SUMITOMO WIRING SYSTEMS Ltd.	TER-WUS120FMSN

TYPE OF TEST	MATERIAL SPEC. NO / DATE / SPECIFICATION	SUPPLIER TEST RESULTS	OK	NOT OK
Tensile strength	Unit:N/mm² Spec: 410-540	462	OK	
Hardness	Unit:HV Spec: 105.0-175.0	158.0	OK	

Signature	Title	Date
T. Okazaki	Components Gr. QA Dep. Manager	19.Nov.'18

MATERIAL TEST RESULTS

Supplier **Part Certification** SUMITOMO WIRING SYSTEMS Ltd.

Mold:SZ5

Supplier	Part Number
SUMITOMO WIRING SYSTEMS Ltd.	8240-0510
Name of Laboratory	Part Name
SUMITOMO WIRING SYSTEMS Ltd.	TER-WUS120FMSN

TYPE OF TEST	MATERIAL SPEC. NO / DATE / SPECIFICATION	SUPPLIER TEST RESULTS	OK	NOT OK
Tensile strength	Unit:N/m㎡ Spec: 410-540	462	OK	
Hardness	Unit:HV Spec: 105.0-175.0	158.0	OK	

Signature	Title	Date
T. Okazaki	Components Gr. QA Dep. Manager	19.Nov.'18

PERFORMANCE TEST

Supplier: SUMITOMO WIRING SYSTEMS Ltd

Mold:SZ2

Part Certification

Page: 1 of 1

Supplier	Part Number
SUMITOMO WIRING SYSTEMS Ltd	8240-0510
Name of Laboratory	Part Name
SUMITOMO WIRING SYSTEMS Ltd	TER-WUS120FMSN

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	3.2	OK	

Signature	Title	Date
T. Okazaki	Components Gr. QA Dep. Manager	19.Nov.'18

PERFORMANCE TEST

Supplier: SUMITOMO WIRING SYSTEMS Ltd

Mold:SZ3

Part Certification

Page: 1 of 1

Supplier	Part Number
SUMITOMO WIRING SYSTEMS Ltd	8240-0510
Name of Laboratory	Part Name
SUMITOMO WIRING SYSTEMS Ltd	TER-WUS120FMSN

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	3.4	OK	

Signature	Title	Date
T. Okazaki	Components Gr. QA Dep. Manager	19.Nov.'18

PERFORMANCE TEST

Supplier: SUMITOMO WIRING SYSTEMS Ltd

Mold:SZ4

Part Certification

Page 1 of 1

Supplier	Part Number
SUMITOMO WIRING SYSTEMS Ltd	8240-0510
Name of Laboratory	Part Name
SUMITOMO WIRING SYSTEMS Ltd	TER-WUS120FMSN

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
T. Okazaki	Components Gr. QA Dep. Manager	19.Nov.'18

PERFORMANCE TEST

Supplier: SUMITOMO WIRING SYSTEMS Ltd

Mold:SZ5

Part Certification

Page: 1 of 1

Supplier	Part Number
SUMITOMO WIRING SYSTEMS Ltd	8240-0510
Name of Laboratory	Part Name
SUMITOMO WIRING SYSTEMS Ltd	TER-WUS120FMSN

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	3.8	OK	

Signature	Title	Date
T. Okazaki	Components Gr. QA Dep. Manager	19.Nov.'18

19.Nov.'18
Sumitomo Wiring
Systems Ltd.
T. Okazaki

Process Capability data

Part Name: TER-WUS120FMSN Part No: 8240-0510

Mold:SZ2

Measurement Place	1						
Standard	2.55						
UCL	2.75						
LCL	2.35						
n1	2.510						
n2	2.520						
n3	2.530						
n4	2.520						
n5	2.520						
n6	2.530						
n7	2.520						
n8	2.520						
n9	2.530						
n10	2.520						
n11	2.520						
n12	2.520						
n13	2.530						
n14	2.520						
n15	2.520						
n16	2.530						
n17	2.520						
n18	2.520						
n19	2.520						
n20	2.520						
n21	2.510						
n22	2.520						
n23	2.520						
n24	2.520						
n25	2.530						
n26	2.530						
n27	2.530						
n28	2.520						
n29	2.520						
n30	2.530						
x	2.520						
MAX	2.530						
MIN	2.510						
δ	0.004						
CP	16.667						
CPK	14.358						

Measurement Place

Please refer to an attached sheet drawing

19.Nov.'18
Sumitomo Wiring
Systems Ltd.
T. Okazaki

Process Capability data

Part Name: TER-WUS120FMSN Part No: 8240-0510

Mold:SZ3

Measurement Place	1						
Standard	2.55						
UCL	2.75						
LCL	2.35						
n1	2.530						
n2	2.520						
n3	2.520						
n4	2.520						
n5	2.510						
n6	2.530						
n7	2.520						
n8	2.510						
n9	2.530						
n10	2.520						
n11	2.530						
n12	2.520						
n13	2.540						
n14	2.530						
n15	2.520						
n16	2.530						
n17	2.540						
n18	2.520						
n19	2.520						
n20	2.520						
n21	2.520						
n22	2.520						
n23	2.520						
n24	2.530						
n25	2.520						
n26	2.530						
n27	2.530						
n28	2.530						
n29	2.540						
n30	2.520						
x	2.520						
MAX	2.540						
MIN	2.510						
δ	0.008						
CP	8.333						
CPK	7.279						

Measurement Place

Please refer to an attached sheet drawing

19.Nov.'18
Sumitomo Wiring
Systems Ltd.
T. Okazaki

Process Capability data

Part Name: TER-WUS120FMSN Part No: 8240-0510

Mold:SZ4

Measurement Place	1						
Standard	2.55						
UCL	2.75						
LCL	2.35						
n1	2.520						
n2	2.520						
n3	2.520						
n4	2.520						
n5	2.530						
n6	2.520						
n7	2.510						
n8	2.520						
n9	2.530						
n10	2.520						
n11	2.520						
n12	2.520						
n13	2.530						
n14	2.540						
n15	2.520						
n16	2.520						
n17	2.510						
n18	2.530						
n19	2.530						
n20	2.520						
n21	2.520						
n22	2.510						
n23	2.520						
n24	2.520						
n25	2.530						
n26	2.520						
n27	2.520						
n28	2.520						
n29	2.520						
n30	2.530						
x	2.520						
MAX	2.540						
MIN	2.510						
δ	0.004						
CP	16.667						
CPK	14.333						

Measurement Place

Please refer to an attached sheet drawing

19.Nov.'18
Sumitomo Wiring
Systems Ltd.
T. Okazaki

Process Capability data

Part Name: TER-WUS120FMSN Part No: 8240-0510

Mold:SZ5

Measurement Place	1						
Standard	2.55						
UCL	2.75						
LCL	2.35						
n1	2.530						
n2	2.530						
n3	2.520						
n4	2.520						
n5	2.530						
n6	2.520						
n7	2.520						
n8	2.510						
n9	2.520						
n10	2.520						
n11	2.510						
n12	2.520						
n13	2.530						
n14	2.520						
n15	2.530						
n16	2.520						
n17	2.510						
n18	2.510						
n19	2.530						
n20	2.520						
n21	2.530						
n22	2.530						
n23	2.530						
n24	2.530						
n25	2.520						
n26	2.520						
n27	2.520						
n28	2.520						
n29	2.520						
n30	2.520						
x	2.520						
MAX	2.530						
MIN	2.510						
δ	0.006						
CP	11.111						
CPK	9.556						

Measurement Place

Please refer to an attached sheet drawing

Components Group/Testing & Validation Department

2018		
Approval	Check	Charged
H.Nakano Manager 2018/3/9	K.Motooka 2018/3/9	Y.Hanebuchi 2018/3/9

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** Exciting Force(kgf): #1 3800; #4 2500; #5 2000; #6 2000; #7 1400; #8 1400 Amplitude(mmP-P): #1 56; #4 51; #5 26; #6 26; #7 51; #8 51 Acceleration(m/s2): #1 980; #4 940; #5 980; #6 980; #7 911; #8 911 Frequency(Hz): #1 5 to 2000; #4 5 to 2500; #5 5 to 2500; #6 5 to 2500; #7 5 to 5000; #8 5～5000 Temperature(deg. C): #1 -40 to 200; #4 -40 to 200; #5 -40 to 200; #6 -40 to 200; #7 -40 to 200; #8 -40 to 200 Humidity(%RH): #1 30 to 98; #4 30 to 98; #5 30 to 98; #6 30 to 98; #7 30 to 98; #8 30 to 98 **Table-1 (cont.)** Exciting Force(kgf): #13 1400; #17 2500; #18 3823; #19 2450; #20 2651 Amplitude(mmP-P): #13 100; #17 60; #18 56; #19 51; #20 60 Acceleration(m/s2): #13 568; #17 756; #18 980; #19 1142; #20 963 Frequency(Hz): #13 5 to 2000; #17 5 to 2000; #18 5 to 2000; #19 5 to 2500; #20 DC to 2500 Temperature(deg. C): #13 -40 to 200; #17 -40 to 200; #18 -40 to 200; #19 -60 to 180; #20 -40 to 200 Humidity(%RH): #13 30 to 98; #17 30 to 98; #18 30 to 98; #19 30 to 98; #20 30 to 98 **Table-1 (cont.)** Exciting Force(kgf): #21 2500; #22 2500; #23 2500; #24 2500; #25 2447; #26 4500 Amplitude(mmP-P): #21 60; #22 60; #23 51; #24 51; #25 51; #26 51 Acceleration(m/s2): #21 963; #22 963; #23 1142; #24 1142; #25 1142; #26 1000 Frequency(Hz): #21 5 to 2500; #22 5 to 2500; #23 5 to 2600; #24 5 to 2600; #25 5 to 2600; #26 5 to 2800 Temperature(deg. C): #21 -40 to 200; #22 -40 to 200; #23 -60 to 180; #24 -60 to 180; #25 -60 to 180; #26 -45 to 180 Humidity(%RH): #21 30 to 98; #22 30 to 98; #23 30 to 98; #24 30 to 98; #25 30 to 98; #26 30 to 98	OK
Salt water spray	Combined corrosion tester	●		SCD-35AG071	4	**Table-2** Temperature(deg. C): #1 #2 ～35℃; #3 ～50℃; #4 Max60℃ spray rate: #1 #2 1ml; #3 1～2ml; #4 —	OK
Thermal shock test	Thermal Shock chamber	●		SCD-35AG072	13	**Table-3** Temp. Low(deg. C): #1 -70; #2 -65; #4 -65; #8 -70; #9 -70; #10 -70 Temp. High(deg. C): #1 200; #2 200; #4 200; #8 200; #9 200; #10 200 **Table-3 (cont.)** Temp. Low(deg. C): #11 -70; #12 -70; #13 -70; #14 -70; #15 -70; #16 -70; #17 -70 Temp. High(deg. C): #11 200; #12 200; #13 200; #14 200; #15 200; #16 200; #17 200	OK
Dewing test	Thermal Shock with Humidity chamber	●		SCD-35AG094	3	**Table-4** Temp. Low(deg. C): #1 -55; #2 -55; #3 -55 Temp. High(deg. C): #1 200; #2 200; #3 200 Humidity(%RH): #1 to 95; #2 to 95; #3 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** Temp. Low(deg. C): #3 -70; #4 -70; #5 -70; #6 -70; #7 -70; #8 -70; #9 -70; #10 -70 Temp. High(deg. C): #3 180; #4 180; #5 150; #6 150; #7 180; #8 150; #9 150; #10 150 Humidity(%RH): #3 20～98; #4 20～98; #5 20～98; #6 20～98; #7 30～98; #8 20～98; #9 20～98; #10 20～98 **Table-5 (cont.)** Temp. Low(deg. C): #11 -70; #12 -70; #13 -70; #14 -70; #15 -70 Temp. High(deg. C): #11 150; #12 150; #13 150; #14 150; #15 150 Humidity(%RH): #11 20～98; #12 20～98; #13 30～95; #14 30～95; #15 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	Windless and High Temperature Chamber Power supply		●	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
Maximum Test Current Capability Terminal 1008 Hour Current Cycling	recorder thermocouple						
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

MATERIAL SAFETY DATA SHEET

Revision date: June 4, 2012
Revision No.: 2

1. Product and Company Information

Classification	Material name	Correspondence JIS number
Copper	Oxygen-free copper	C1020
	Tough-pitch copper	C1100
	Phosphorous-deoxidized copper	C1220
Copper Alloy	Brass	C2600,C2680,C2801

Supplier Company Name : DOWA METALTECH CO.,LTD
2630 Shingai, Iwata-shi, Shizuoka-ken, 438-0025 JAPAN
Tel: +81-538-37-5111, Fax: +81-538-37-0147

Manufacturer Company Name : DOWA METAL CO.,LTD
& Information Qualty Control Dept.
767 Matsunokijima, Iwata-shi, Shizuoka-ken, 438-0125 JAPAN
Tel: +81-539-62-3131, Fax: +81-539-62-3996
E-mail:DML_MSDS@dowa.co.jp

2. Hazards Identification

2-1 Copper

GHS Classification

Physical Hazards

Explosives	: Not applicable
Flammable gases	: Not applicable
Flammable aerosols	: Not applicable
Oxidizing gases	: Not applicable
Gases under pressure	: Not applicable
Flammable liquids	: Not applicable
Flammable solids	: Classification not possible
Self-reactive substances and mixtures	: Not applicable
Pyrophoric liquids	: Not applicable
Pyrophoric solids	: Classification not possible
Self-heating substances and mixtures	: Classification not possible
Substances and mixture which, in contact with water, emit flammable gases	: Classification not possible
Oxidizing liquids	: Not applicable
Oxidizing solids	: Not applicable
Organic peroxides	: Not applicable
Corrosive to metals	: Classification not possible

Health Hazards

Acute toxicity (oral)	: Classification not possible
Acute toxicity (skin)	: Classification not possible
Acute toxicity (inhalation: gas)	: Not applicable
Acute toxicity (inhalation: vapor)	: Not applicable
Acute toxicity (inhalation: dust, mist)	: Classification not possible
Skin corrosion / irritation	: Classification not possible
Serious eye damage / eye irritation	: Classification not possible
Respiratory sensitization	: Classification not possible
Skin sensitization	: Classification not possible
Germ cell mutagenicity	: Classification not possible
Carcinogenicity	: Not classified

Reproductive toxicity : Classification not possible

Specific target organ toxicity:
single exposure : Category3 (Respiratory tract irritation)
Specific target organ toxicity:
repeated exposure : Category1 (Liver)
Aspiration hazard : Classification not possible

Environmental Hazards
Aquatic toxicity (acute) : Classification not possible
Aquatic toxicity (chronic) : Category4

Pictogram

3. Specification of substance

Chemical name : Cu,Cu-Zn alloy

Element	Cu	Pb	Fe	Zn	P
CAS No.	7440-50-8	7439-92-1	7439-89-6	7440-66-6	7723-14-0
Identification No. by PRTR Law	-	-	-	-	-
Enforcement Serial No. by Industrial Safety and Health Laws	Appendix No.9-379	-	-	-	-

Chemical Composition (wt%)

Element	Cu	Pb※	Fe※	Zn	P
C1020	≦99.96	-	-	-	-
C1100	≦99.90	-	-	-	-
C1220	≦99.90	-	-	-	0.015-0.040
C2600	68.5-71.5	≦0.05	≦0.05	Bal.	-
C2680	64.0-68.0	≦0.05	≦0.05	Bal.	-
C2801	59.0-62.0	≦0.1	≦0.07	Bal.	-

※No intentional addition.

4. First aid

4-1 Caught in the eyes:
Immediately flush out dust with sufficient clean water and seek physician's treatment for pain or uncomfortable feeling.
4-2 Struck to the skin: wash the affected area with soap.
4-3 Inhaled: If a large quantity of vapors and particles are inhaled, move the patient to a place of clean air immediately. Give the patient oxygen inhalation and have him/her seek immediate physician's treatments in case it seems to be necessary.
4-4 Swallowed: If large quantities of vapors and particles are swallowed, make him/her vomit and then have him/her seek physician's treatments immediately.

5. Action for fire

Extinguishing: -- (Incombustibles)

6. Action for leakage

No requirement for solid metal product.

7. Notes for handling and storage

Handling: To prevent the inhalation of vapors or particles, wear personal protection such as a mask during welding or grinding processes.
The cut ends or edges of the strip are sharp enough to slice, so take sufficient care when handling.
Storage: Do not store together with acids.

8. Avoidance of exposure

Acceptable concentration :
Japan Society for Occupational Health: No Requirement
ACGIH TWA * Cu 1mg/m3 (dust)
Cu 0.2mg/m3 (fume or vapor)
Protective outfit
For mouth: Dustproof mask
For eyes: Dustproof glasses
For hands: Rubber or plastic gloves
For body: --
* ACGIH TWA: American Conference of Governmental Industrial Hygienists
Time Weighted Average

9. Physical / chemical properties

	C1020	C1100	C1220	C2600	C2680	C2801
Appearance	Metallic brightness					
Melting point(degree C)	1083	1083	1083	955	930	905
Specific gravity(g/cm^3)	8.94	8.89-8.94	8.94	8.53	8.47	8.39

10. Hazardous information

Stability / reactivity: Stable under normal handling conditions.

11. Toxicological information

(No information about the alloy, but information on each element is shown below.)
Acute toxicity:
Orally administered - mouse LD50 >4000mg/kg (Copper dusts)

Carcinogenicity:
Japan Society for Occupational Health: No Classification

12. Ecological Information

(No information about the alloy, but information on each element is shown below.)
Water Pollution Control Law:
Life environment clause (for Copper)

13. Note for scrapping

Should be collected and recycled as a metal.
Contact scrapping agent.

14. Note for transportation

Handle with care when transporting as follows:
Take care not to allow the air to cause corrosion. Do not drop or damage packaging.

15. Applicable legislation

(No information about the alloy, but information on each element is shown below.)
Water Pollution Control Law:
Life environment clause (for Copper)
NB-series does not correspond to Poisons, Deleterious Substances, Specific Deleterious Substances, in Poisonous and Deleterious Substances Control Law.

16. Other Information

We have tried to make it as accurate and useful as possible, but can take no responsibility for its use, misuse or accuracy. We have not verified this information, and can not guarantee that it is up-to-date.

PART SUBMISSION WARRANT

DAIMLERCHRYSLER Ford GM

Part Name: TER-WUS120FMSN			Cust. Part Number:
Shown on Drawing No.: S- 107033			Org. Part Number: 8240-0510
Engineering Drawing Change Level: 5			Dated: 30.Nov.'17
Additional Engineering Changes: N/A			Dated: N/A
Safety and/or Government Regulation: ○ Yes ◉ No	Purchase Order No.: N/A		Weight: 0.0003 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: 1820-NAKANOIKE-MIKKAICHI-CHO				Buyer/Buyer Code:
City: SUZUKA	Region: MIE	Postal Code: 513-8631	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 465111357

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: 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: *T. Okazaki*		Dated: 19.Nov.'18
Print Name: Tomonori Okazaki	Phone No.: 81-593-40-0397	Fax: 81-593-82-9508
Title: Components Gr. QA Dep. Manager	E-mail: tomonori-okazaki@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-WUS120FMSN			Cust. Part Number:
Shown on Drawing No.: S- 107033			Org. Part Number: 8240-0510
Engineering Drawing Change Level: 5			Dated: 30.Nov.'17
Additional Engineering Changes: N/A			Dated: N/A
Safety and/or Government Regulation: ○ Yes ◉ No	Purchase Order No.: N/A		Weight: 0.0003 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: 1820-NAKANOIKE-MIKKAICHI-CHO				Buyer/Buyer Code:
City: SUZUKA	Region: MIE	Postal Code: 513-8631	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 465111357

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 1 - Warrant only (and for designated appearance items, an Appearance Approval Report) submitted to customer
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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: 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: *T. Okazaki*		Dated: 19.Nov.'18
Print Name: Tomonori Okazaki	Phone No.: 81-593-40-0397	Fax: 81-593-82-9508
Title: Components Gr. QA Dep. Manager	E-mail: tomonori-okazaki@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-WUS120FMSN			Cust. Part Number:
Shown on Drawing No.: S- 107033			Org. Part Number: 8240-0510
Engineering Drawing Change Level: 5			Dated: 30.Nov.'17
Additional Engineering Changes: N/A			Dated: N/A
Safety and/or Government Regulation: ○ Yes ◉ No	Purchase Order No.: N/A		Weight: 0.0003 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: 1820-NAKANOIKE-MIKKAICHI-CHO				Buyer/Buyer Code:
City: SUZUKA	Region: MIE	Postal Code: 513-8631	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 465111357

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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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: SZ4 Cavity: 1(SZ4) 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*.
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Organization Authorized Signature: *T. Okazaki*		Dated: 19.Nov.'18
Print Name: Tomonori Okazaki	Phone No.: 81-593-40-0397	Fax: 81-593-82-9508
Title: Components Gr. QA Dep. Manager	E-mail: tomonori-okazaki@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-WUS120FMSN			Cust. Part Number:
Shown on Drawing No.: S- 107033			Org. Part Number: 8240-0510
Engineering Drawing Change Level: 5			Dated: 30.Nov.'17
Additional Engineering Changes: N/A			Dated: N/A
Safety and/or Government Regulation: ○ Yes ◉ No	Purchase Order No.: N/A		Weight: 0.0003 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: 1820-NAKANOIKE-MIKKAICHI-CHO				Buyer/Buyer Code:
City: SUZUKA	Region: MIE	Postal Code: 513-8631	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 465111357

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

REASON FOR SUBMISSION (Check at least one)

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- ○ Engineering Change(s)
- ○ Tooling: Transfer, Replacement, Refurbishment, or additional
- ○ Correction of Discrepancy
- ○ Tooling Inactive >than 1 Year
- ○ Change to Optional Construction or Material
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- ○ Change in Part Processing
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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: SZ5 Cavity: 1(SZ5) 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*.

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EXPLANATION / COMMENTS:

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Organization Authorized Signature: *T. Okazaki*		Dated: 19.Nov.'18
Print Name: Tomonori Okazaki	Phone No.: 81-593-40-0397	Fax: 81-593-82-9508
Title: Components Gr. QA Dep. Manager	E-mail: tomonori-okazaki@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)