

MHF[®] I Connector

Ground contact gold plating
(Anti-static reel version)

Test Report

Product Specification no. PRS-1676

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13	T20094	November 11, 2020	S.Taguchi	-	M. Takemoto
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11	T19068	June 20, 2019	K. Ikeshita	J. Tonai	Y. Hashimoto
Rev.	ECN	Date	Prepared by	Checked by	Approved by

1. Purpose

To evaluate the performance of MHF I Connector in accordance with PRS-1676

2. Specimen

(1) MHF I PLUG (Part No. 20278-112R-**)

1-1. Part No.20278-112R-08 (20278-102R-08)

Cable: AWG#36 coaxial cable (jacket diameter 0.81mm)

1-2. Part No.20278-112R-13 (20278-102R-13)

Cable: AWG#32 coaxial cable (jacket diameter 1.13mm)

1-3. Part No.20278-112R-32 (20278-102R-32)

Cable: AWG#32 coaxial cable (jacket diameter 1.32mm)

1-4. Part No.20278-112R-18 (20278-102R-18)

Cable: AWG#30 coaxial cable (jacket diameter 1.80mm)

* Part No.20278-112R-**, 20278-102R-** are different in the wire connection method Only,
so we tested part No. 20278-112R-** as representative.

(2) MHF I RECEPTACLE (Part No. 20279-001E-01(Anti-static reel version))

* Part No.20279-001E-01、20279-001E-03、20279-001E-05 are different in the packing style only,
so we tested part No. 20279-001E-01 as representative.

3. Test Sequence

All the evaluations were performed in accordance with Table 1.Test Sequence.

4. Result

See Table 2 and sheet from 12 to 22. For the details of the testing conditions and requirements, see PRS-1676.

The "n" in the tables show the number of measurement points.

5. Conclusion

All the specimens met the requirements of PRS-1676.

Table 1 Test Sequence and Sample Quantity

Test Item	Group													
	A	B	C	D	E	F	G	H	J	K	L	M	N	P
Contact Resistance					1,3	1,3	1,3	1,3	1,4	1,4	1,3	1,3		
Insulation Resistance									2,5	2,5				
Dielectric Withstanding Voltage	1													
VSWR		1												
Unmating Force			1											
Crimp Strength				1										
Durability					2									
Cable Retention Force						2								
Vibration							2							
Shock								2						
Thermal Shock									3					
Humidity (Steady State)										3				
Salt Water Spray											2			
High Temperature Life												2		
Solder ability													1	
Soldering Heat Resistance														1
Sample Quantity	10	5	10	10	10	10	10	10	10	10	10	10	10	10

Numbers indicate sequence in which tests are performed.

Table 2 Test Result

Group	Test items	Specification	n	Unit	AVE.	MAX.	MIN.	S	Judgement	
	Measurements									
A	Dielectric withstanding voltage									
	Spec: No abnormalities such as creeping discharge, flashover, insulator breakdown occur.									
	20278-112R-08	-	10	-	No abnormality				Pass	
	20278-112R-13	-	10	-	No abnormality				Pass	
	20278-112R-32	-	10	-	No abnormality				Pass	
	20278-112R-18	-	10	-	No abnormality				Pass	
B	VSWR									
	Plug 20278-112R-08									
		0.1~3.0GHz	1.3 MAX.	5	-	1.151	1.17	1.14	0.010	Pass
		3.0~6.0GHz	1.5 MAX.	5	-	1.155	1.16	1.15	0.005	Pass
		6.0~9.0GHz	1.9 MAX.	5	-	1.222	1.26	1.19	0.023	Pass
	Plug 20278-112R-13									
		0.1~3.0GHz	1.3 MAX.	5	-	1.037	1.04	1.03	0.004	Pass
		3.0~6.0GHz	1.5 MAX.	5	-	1.121	1.14	1.11	0.009	Pass
		6.0~9.0GHz	1.9 MAX.	5	-	1.260	1.31	1.21	0.028	Pass
	Plug 20278-112R-32									
		0.1~3.0GHz	1.3 MAX.	5	-	1.082	1.11	1.06	0.012	Pass
		3.0~6.0GHz	1.5 MAX.	5	-	1.178	1.21	1.15	0.019	Pass
		6.0~9.0GHz	1.9 MAX.	5	-	1.294	1.38	1.25	0.038	Pass
	Plug 20278-112R-18									
		0.1~3.0GHz	1.3 MAX.	5	-	1.125	1.14	1.11	0.011	Pass
		3.0~6.0GHz	1.5 MAX.	5	-	1.207	1.23	1.19	0.015	Pass
		6.0~9.0GHz	1.9 MAX.	5	-	1.324	1.36	1.28	0.030	Pass
	Receptacle 20279-001E-01									
		0.1~3.0GHz	1.3 MAX.	5	-	1.085	1.09	1.08	0.006	Pass
		3.0~6.0GHz	1.4 MAX.	5	-	1.233	1.27	1.18	0.033	Pass
		6.0~9.0GHz	1.8 MAX.	5	-	1.515	1.60	1.41	0.068	Pass
C	Unmating force									
	Total force (20278-112R-**)									
		Initial	5 MIN.	10	N	16.11	17.4	14.8	0.77	Pass
		30 cycles	3 MIN.	10	N	11.04	11.9	10.2	0.56	Pass
	Inner contact (20278-112R-**)									
		Initial	0.15 MIN.	10	N	0.369	0.39	0.35	0.014	Pass
	30 cycles	0.10 MIN.	10	N	0.230	0.25	0.22	0.011	Pass	
D	Crimp strength									
	20278-112R-08									
		-	10N MIN.	10	N	16.91	19.0	15.3	1.10	Pass
	20278-112R-13									
		-	10N MIN.	10	N	16.85	18.6	15.2	0.97	Pass
	20278-112R-32									
	-	10N MIN.	10	N	19.52	20.9	18.3	0.86	Pass	
20278-112R-18										
	-	15N MIN.	10	N	24.92	27.4	22.9	1.31	Pass	

Group	Test items	Specification	n	Unit	AVE.	MAX.	MIN.	S	Judgement	
	Measurements									
E	Durability									
	20278-112R-08									
	Contact resistance of main contact									
		Initial	20 MAX.	10	mΩ	13.25	13.9	12.3	0.45	Pass
		After testing	25 MAX.			12.98	13.4	11.9	0.43	Pass
	Contact resistance of ground contact									
		Initial	10 MAX.	10	mΩ	5.21	7.1	4.4	0.97	Pass
		After testing	15 MAX.			5.78	7.2	4.8	0.82	Pass
	Appearance									
		Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality			Pass	
		After testing				No abnormality			Pass	
	20278-112R-13									
	Contact resistance of main contact									
		Initial	20 MAX.	10	mΩ	6.45	7.1	6.1	0.30	Pass
		After testing	25 MAX.			6.40	6.8	6.1	0.23	Pass
	Contact resistance of ground contact									
		Initial	10 MAX.	10	mΩ	5.29	6.8	3.5	0.82	Pass
		After testing	15 MAX.			5.46	6.0	4.1	0.59	Pass
	Appearance									
		Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality			Pass	
		After testing				No abnormality			Pass	
	20278-112R-32									
	Contact resistance of main contact									
		Initial	20 MAX.	10	mΩ	6.77	7.0	6.5	0.22	Pass
		After testing	25 MAX.			7.27	7.8	6.9	0.28	Pass
	Contact resistance of ground contact									
		Initial	10 MAX.	10	mΩ	4.96	5.5	4.5	0.26	Pass
		After testing	15 MAX.			6.53	7.6	4.9	0.80	Pass
Appearance										
	Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality			Pass		
	After testing				No abnormality			Pass		
20278-112R-18										
Contact resistance of main contact										
	Initial	20 MAX.	10	mΩ	8.52	9.0	8.3	0.22	Pass	
	After testing	25 MAX.			9.12	9.4	8.5	0.28	Pass	
Contact resistance of ground contact										
	Initial	10 MAX.	10	mΩ	4.87	5.5	4.2	0.40	Pass	
	After testing	15 MAX.			5.74	8.0	3.2	1.65	Pass	
Appearance										
	Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality			Pass		
	After testing				No abnormality			Pass		

Group	Test items	Specification	n	Unit	AVE.	MAX.	MIN.	S	Judgement
	Measurements								
F	Cable retention force								
	20278-112R-08								
	Contact resistance of main contact								
	Initial	20 MAX.	10	mΩ	12.98	13.9	12.2	0.61	Pass
	After testing	25 MAX.			14.30	15.0	13.6	0.56	Pass
	Contact resistance of ground contact								
	Initial	10 MAX.	10	mΩ	5.09	5.7	4.4	0.48	Pass
	After testing	15 MAX.			6.00	7.0	5.2	0.51	Pass
	Electrical discontinuity								
	Spec: No creeping discharge, flashover, no insulator breakdown shall occur.								
	After testing	-	10	-	No abnormality				Pass
	Appearance								
	Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality				Pass
	After testing				No abnormality				Pass
	20278-112R-13								
	Contact resistance of main contact								
	Initial	20 MAX.	10	mΩ	6.84	7.8	5.6	0.74	Pass
	After testing	25 MAX.			6.67	7.7	6.0	0.53	Pass
	Contact resistance of ground contact								
	Initial	10 MAX.	10	mΩ	4.19	4.8	4.0	0.26	Pass
	After testing	15 MAX.			4.32	5.0	4.0	0.26	Pass
	Electrical discontinuity								
	Spec: No creeping discharge, flashover, no insulator breakdown shall occur.								
	After testing	-	10	-	No abnormality				Pass
Appearance									
Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality				Pass	
After testing				No abnormality				Pass	
20278-112R-32									
Contact resistance of main contact									
Initial	20 MAX.	10	mΩ	6.90	7.5	6.1	0.41	Pass	
After testing	25 MAX.			7.20	8.2	6.6	0.43	Pass	
Contact resistance of ground contact									
Initial	10 MAX.	10	mΩ	4.85	6.0	3.4	0.92	Pass	
After testing	15 MAX.			5.51	6.3	4.9	0.49	Pass	
Electrical discontinuity									
Spec: No creeping discharge, flashover, no insulator breakdown shall occur.									
After testing	-	10	-	No abnormality				Pass	
Appearance									
Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality				Pass	
After testing				No abnormality				Pass	

Group	Test items	Specification	n	Unit	AVE.	MAX.	MIN.	S	Judgement
	Measurements								
F	Cable retention force								
	20278-112R-18								
	Contact resistance of main contact								
	Initial	20 MAX.	10	mΩ	8.49	9.3	6.0	0.96	Pass
	After testing	25 MAX.			8.85	9.8	6.6	0.89	Pass
	Contact resistance of ground contact								
	Initial	10 MAX.	10	mΩ	5.05	5.7	4.5	0.47	Pass
	After testing	15 MAX.			5.37	6.3	4.2	0.80	Pass
	Electrical discontinuity								
	Spec: No creeping discharge, flashover, no insulator breakdown shall occur.								
	After testing	-	10	-	No abnormality				Pass
	Appearance								
	Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality				Pass
	After testing				No abnormality				Pass
G	Vibration								
	20278-112R-08								
	Contact resistance of main contact								
	Initial	20 MAX.	10	mΩ	13.49	15.0	12.7	0.70	Pass
	After testing	25 MAX.			13.74	14.9	13.0	0.57	Pass
	Contact resistance of ground contact								
	Initial	10 MAX.	10	mΩ	5.24	7.6	4.3	1.06	Pass
	After testing	15 MAX.			4.96	6.9	3.8	1.13	Pass
	Electrical discontinuity								
	Spec: No creeping discharge, flashover, no insulator breakdown shall occur.								
	After testing	-	10	-	No abnormality				Pass
	Appearance								
	Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality				Pass
	After testing				No abnormality				Pass
20278-112R-13									
Contact resistance of main contact									
Initial	20 MAX.	10	mΩ	6.90	7.5	6.6	0.30	Pass	
After testing	25 MAX.			6.76	7.4	6.5	0.27	Pass	
Contact resistance of ground contact									
Initial	10 MAX.	10	mΩ	4.71	6.6	4.0	0.87	Pass	
After testing	15 MAX.			4.66	6.5	4.0	0.79	Pass	
Electrical discontinuity									
Spec: No creeping discharge, flashover, no insulator breakdown shall occur.									
After testing	-	10	-	No abnormality				Pass	
Appearance									
Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality				Pass	
After testing				No abnormality				Pass	

Group	Test items	Specification	n	Unit	AVE.	MAX.	MIN.	S	Judgement
	Measurements								
G	Vibration								
	20278-112R-32								
	Contact resistance of main contact								
	Initial	20 MAX.	10	mΩ	6.67	7.2	6.1	0.37	Pass
	After testing	25 MAX.			6.67	7.1	6.1	0.37	Pass
	Contact resistance of ground contact								
	Initial	10 MAX.	10	mΩ	5.03	5.7	4.6	0.38	Pass
	After testing	15 MAX.			5.17	6.5	4.5	0.62	Pass
	Electrical discontinuity								
	Spec: No creeping discharge, flashover, no insulator breakdown shall occur.								
	After testing	-	10	-	No abnormality				Pass
	Appearance								
	Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality				Pass
	After testing				No abnormality				Pass
	20278-112R-18								
	Contact resistance of main contact								
	Initial	20 MAX.	10	mΩ	8.83	10.1	7.8	0.74	Pass
	After testing	25 MAX.			8.50	9.4	7.7	0.50	Pass
	Contact resistance of ground contact								
	Initial	10 MAX.	10	mΩ	5.18	6.3	4.4	0.63	Pass
After testing	15 MAX.	5.20			6.0	4.5	0.45	Pass	
Electrical discontinuity									
Spec: No creeping discharge, flashover, no insulator breakdown shall occur.									
After testing	-	10	-	No abnormality				Pass	
Appearance									
Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality				Pass	
After testing				No abnormality				Pass	
H	Shock								
	20278-112R-08								
	Contact resistance of main contact								
	Initial	20 MAX.	10	mΩ	13.49	15.0	12.7	0.70	Pass
	After testing	25 MAX.			13.04	15.0	12.0	0.87	Pass
	Contact resistance of ground contact								
	Initial	10 MAX.	10	mΩ	5.24	7.6	4.3	1.06	Pass
	After testing	15 MAX.			5.12	7.9	3.9	1.15	Pass
	Electrical discontinuity								
	Spec: No creeping discharge, flashover, no insulator breakdown shall occur.								
	After testing	-	10	-	No abnormality				Pass
	Appearance								
Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality				Pass	
After testing				No abnormality				Pass	

Group	Test items	Specification	n	Unit	AVE.	MAX.	MIN.	S	Judgement
	Measurements								
H	Shock								
	20278-112R-13								
	Contact resistance of main contact								
	Initial	20 MAX.	10	mΩ	6.90	7.5	6.6	0.30	Pass
	After testing	25 MAX.			7.07	8.0	6.7	0.37	Pass
	Contact resistance of ground contact								
	Initial	10 MAX.	10	mΩ	4.71	6.6	4.0	0.87	Pass
	After testing	15 MAX.			5.01	8.3	4.3	1.19	Pass
	Electrical discontinuity								
	Spec: No creeping discharge, flashover, no insulator breakdown shall occur.								
	After testing	-	10	-	No abnormality				Pass
	Appearance								
	Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality				Pass
	After testing				No abnormality				Pass
	20278-112R-32								
	Contact resistance of main contact								
	Initial	20 MAX.	10	mΩ	6.67	7.2	6.1	0.37	Pass
	After testing	25 MAX.			6.73	7.4	6.4	0.39	Pass
	Contact resistance of ground contact								
	Initial	10 MAX.	10	mΩ	5.03	5.7	4.6	0.38	Pass
	After testing	15 MAX.			5.19	6.0	4.7	0.48	Pass
	Electrical discontinuity								
	Spec: No creeping discharge, flashover, no insulator breakdown shall occur.								
	After testing	-	10	-	No abnormality				Pass
Appearance									
Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality				Pass	
After testing				No abnormality				Pass	
20278-112R-18									
Contact resistance of main contact									
Initial	20 MAX.	10	mΩ	8.83	10.1	7.8	0.74	Pass	
After testing	25 MAX.			8.79	9.3	8.0	0.47	Pass	
Contact resistance of ground contact									
Initial	10 MAX.	10	mΩ	5.18	6.3	4.4	0.63	Pass	
After testing	15 MAX.			5.22	5.9	4.3	0.56	Pass	
Electrical discontinuity									
Spec: No creeping discharge, flashover, no insulator breakdown shall occur.									
After testing	-	10	-	No abnormality				Pass	
Appearance									
Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality				Pass	
After testing				No abnormality				Pass	

Group	Test items	Specification	n	Unit	AVE.	MAX.	MIN.	S	Judgement	
	Measurements									
J	Thermal shock									
	20278-112R-08									
	Contact resistance of main contact									
		Initial	20 MAX.	10	mΩ	13.59	14.5	12.8	0.50	Pass
		After testing	25 MAX.			13.71	14.3	13.3	0.34	Pass
	Contact resistance of ground contact									
		Initial	10 MAX.	10	mΩ	5.20	6.2	3.6	0.84	Pass
		After testing	15 MAX.			5.52	7.0	4.0	0.93	Pass
	Insulation residence									
		Initial	500MΩ MIN.	10	MΩ	10,000MΩ MIN.			Pass	
		After testing	100MΩ MIN.			10,000MΩ MIN.			Pass	
	Appearance									
		Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality			Pass	
		After testing				No abnormality			Pass	
	20278-112R-13									
	Contact resistance of main contact									
		Initial	20 MAX.	10	mΩ	7.05	7.7	6.5	0.48	Pass
		After testing	25 MAX.			6.94	7.8	6.3	0.52	Pass
	Contact resistance of ground contact									
		Initial	10 MAX.	10	mΩ	4.61	5.0	4.0	0.33	Pass
		After testing	15 MAX.			4.84	5.7	4.1	0.44	Pass
	Insulation residence									
		Initial	500MΩ MIN.	10	MΩ	10,000MΩ MIN.			Pass	
		After testing	100MΩ MIN.			10,000MΩ MIN.			Pass	
Appearance										
	Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality			Pass		
	After testing				No abnormality			Pass		
20278-112R-32										
Contact resistance of main contact										
	Initial	20 MAX.	10	mΩ	6.62	8.0	6.1	0.54	Pass	
	After testing	25 MAX.			6.61	7.6	5.9	0.52	Pass	
Contact resistance of ground contact										
	Initial	10 MAX.	10	mΩ	4.98	6.5	4.2	0.70	Pass	
	After testing	15 MAX.			5.26	6.4	4.3	0.75	Pass	
Insulation residence										
	Initial	500MΩ MIN.	10	MΩ	10,000MΩ MIN.			Pass		
	After testing	100MΩ MIN.			10,000MΩ MIN.			Pass		
Appearance										
	Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality			Pass		
	After testing				No abnormality			Pass		

Group	Test items	Specification	n	Unit	AVE.	MAX.	MIN.	S	Judgement
	Measurements								
J	Thermal shock								
	20278-112R-18								
	Contact resistance of main contact								
	Initial	20 MAX.	10	mΩ	8.88	9.2	8.6	0.15	Pass
	After testing	25 MAX.			8.92	10.2	8.4	0.53	Pass
	Contact resistance of ground contact								
	Initial	10 MAX.	10	mΩ	4.65	5.7	3.9	0.62	Pass
	After testing	15 MAX.			4.67	5.9	4.1	0.69	Pass
	Insulation residence								
	Initial	500MΩ MIN.	10	MΩ	10,000MΩ MIN.				Pass
	After testing	100MΩ MIN.			10,000MΩ MIN.				Pass
	Appearance								
	Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality				Pass
	After testing				No abnormality				Pass
K	Humidity(Steady State)								
	20278-112R-08								
	Contact resistance of main contact								
	Initial	20 MAX.	10	mΩ	13.51	14.0	12.8	0.40	Pass
	After testing	25 MAX.			13.06	14.1	12.6	0.48	Pass
	Contact resistance of ground contact								
	Initial	10 MAX.	10	mΩ	5.35	6.8	4.1	0.90	Pass
	After testing	15 MAX.			4.81	6.2	4.1	0.80	Pass
	Insulation residence								
	Initial	500MΩ MIN.	10	MΩ	10,000MΩ MIN.				Pass
	After testing	100MΩ MIN.			10,000MΩ MIN.				Pass
	Appearance								
	Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality				Pass
	After testing				No abnormality				Pass
20278-112R-13									
Contact resistance of main contact									
Initial	20 MAX.	10	mΩ	5.48	5.9	5.1	0.29	Pass	
After testing	25 MAX.			6.39	7.2	5.8	0.45	Pass	
Contact resistance of ground contact									
Initial	10 MAX.	10	mΩ	5.78	6.8	5.0	0.53	Pass	
After testing	15 MAX.			5.99	7.1	4.7	0.87	Pass	
Insulation residence									
Initial	500MΩ MIN.	10	MΩ	10,000MΩ MIN.				Pass	
After testing	100MΩ MIN.			10,000MΩ MIN.				Pass	
Appearance									
Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality				Pass	
After testing				No abnormality				Pass	

Group	Test items	Specification	n	Unit	AVE.	MAX.	MIN.	S	Judgement	
	Measurements									
K	Humidity(Steady State)									
	20278-112R-32									
	Contact resistance of main contact									
	Initial	20 MAX.	10	mΩ	6.76	7.2	6.4	0.27	Pass	
	After testing	25 MAX.			6.41	6.9	6.0	0.26	Pass	
	Contact resistance of ground contact									
	Initial	10 MAX.	10	mΩ	4.55	6.5	3.3	1.08	Pass	
	After testing	15 MAX.			4.97	6.8	4.2	0.78	Pass	
	Insulation residence									
	Initial	500MΩ MIN.	10	MΩ	10,000MΩ MIN.				Pass	
	After testing	100MΩ MIN.			10,000MΩ MIN.				Pass	
	Appearance									
	Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality				Pass	
	After testing				No abnormality				Pass	
		20278-112R-18								
		Contact resistance of main contact								
		Initial	20 MAX.	10	mΩ	8.79	9.6	8.2	0.36	Pass
		After testing	25 MAX.			8.83	9.3	8.3	0.30	Pass
		Contact resistance of ground contact								
		Initial	10 MAX.	10	mΩ	4.79	5.7	4.3	0.41	Pass
After testing		15 MAX.	4.47			5.5	4.0	0.42	Pass	
Insulation residence										
Initial		500MΩ MIN.	10	MΩ	10,000MΩ MIN.				Pass	
After testing		100MΩ MIN.			10,000MΩ MIN.				Pass	
Appearance										
Initial		No abnormality adversely affecting the performance shall occur.	10	-	No abnormality				Pass	
After testing					No abnormality				Pass	
L		Salt water spray								
		20278-112R-08								
		Contact resistance of main contact								
		Initial	20 MAX.	10	mΩ					Pass
		After testing	25 MAX.							Pass
		Contact resistance of ground contact								
		Initial	10 MAX.	10	mΩ					Pass
	After testing	15 MAX.							Pass	
	Appearance									
	Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality				Pass	
	After testing				No abnormality				Pass	

Group	Test items	Specification	n	Unit	AVE.	MAX.	MIN.	S	Judgement
	Measurements								
L	20278-112R-13								
	Contact resistance of main contact								
	Initial	20 MAX.	10	mΩ					Pass
	After testing	25 MAX.							Pass
	Contact resistance of ground contact								
	Initial	10 MAX.	10	mΩ					Pass
	After testing	15 MAX.							Pass
	Appearance								
	Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality				Pass
	After testing				No abnormality				Pass
	20278-112R-32								
	Contact resistance of main contact								
	Initial	20 MAX.	10	mΩ					Pass
	After testing	25 MAX.							Pass
	Contact resistance of ground contact								
	Initial	10 MAX.	10	mΩ					Pass
	After testing	15 MAX.							Pass
	Appearance								
	Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality				Pass
	After testing				No abnormality				Pass
	20278-112R-18								
Contact resistance of main contact									
Initial	20 MAX.	10	mΩ					Pass	
After testing	25 MAX.							Pass	
Contact resistance of ground contact									
Initial	10 MAX.	10	mΩ					Pass	
After testing	15 MAX.							Pass	
Appearance									
Initial	No abnormality adversely affecting the performance shall occur.	10	-	No abnormality				Pass	
After testing				No abnormality				Pass	

Group	Test items	Specification	n	Unit	AVE.	MAX.	MIN.	S	Judgement
	Measurements								
M	High Temperature Life								
	20278-112R-08								
	Contact resistance of main contact								
	Initial	20 MAX.	10	mΩ	13.40	15.4	12.8	0.76	Pass
	After testing	25 MAX.			13.17	14.2	12.4	0.49	Pass
	Contact resistance of ground contact								
	Initial	10 MAX.	10	mΩ	4.97	6.3	4.2	0.67	Pass
	After testing	15 MAX.			5.20	6.4	4.1	0.66	Pass
	Appearance								
	Initial	No abnormality	10	-	No abnormality				Pass
	After testing				No abnormality				Pass
	20278-112R-13								
	Contact resistance of main contact								
	Initial	20 MAX.	10	mΩ	5.93	7.5	5.3	0.69	Pass
	After testing	25 MAX.			6.94	7.8	6.3	0.45	Pass
	Contact resistance of ground contact								
	Initial	10 MAX.	10	mΩ	5.72	7.6	4.6	1.08	Pass
	After testing	15 MAX.			7.19	8.9	6.1	1.14	Pass
	Appearance								
	Initial	No abnormality	10	-	No abnormality				Pass
	After testing				No abnormality				Pass
	20278-112R-32								
	Contact resistance of main contact								
	Initial	20 MAX.	10	mΩ	6.97	7.5	6.4	0.35	Pass
After testing	25 MAX.	7.34			8.2	6.6	0.50	Pass	
Contact resistance of ground contact									
Initial	10 MAX.	10	mΩ	5.00	5.9	4.4	0.41	Pass	
After testing	15 MAX.			5.97	7.4	5.3	0.67	Pass	
Appearance									
Initial	No abnormality	10	-	No abnormality				Pass	
After testing				No abnormality				Pass	

Group	Test items	Specification	n	Unit	AVE.	MAX.	MIN.	S	Judgement
	Measurements								
M	High Temperature Life								
	20278-112R-18								
	Contact resistance of main contact								
	Initial	20 MAX.	10	mΩ	8.86	9.4	8.5	0.29	Pass
	After testing	25 MAX.			9.61	10.5	9.2	0.40	Pass
	Contact resistance of ground contact								
	Initial	10 MAX.	10	mΩ	4.56	5.1	3.8	0.45	Pass
	After testing	15 MAX.			5.14	5.8	4.5	0.43	Pass
	Appearance								
	Initial	No abnormality	10	-	No abnormality				Pass
After testing	No abnormality				Pass				
N	Solder ability								
	Spec: More than 95% of the dipped surface shall be evenly wet.								
	After testing	-	10	-	No abnormality				Pass
P	Reflow soldering heat resistance								
	Appearance								
	Spec: No abnormality adversely affecting the performance shall occur.								
	After testing	-	10	-	No abnormality				Pass

















