

MHF® I Connector

Ground contact gold plating
(Anti-static reel version)

Test Report

Product Specification no. PRS-1676

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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), 20431-001E-01, 20441-001E-01)

*The evaluation results are representative of 20279-001E-01.

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	Plug	10	10	10	10	10	10	10	10	10	10	10	10	-	-
	Receptacle		5		-									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									
	0.1~3GHz		1.30 MAX.	10	-	1.079	1.09	1.07	0.008	Pass
	3~6GHz		1.50 MAX.	10	-	1.156	1.20	1.14	0.016	Pass
	6~9GHz		1.90 MAX.	10	-	1.223	1.27	1.19	0.024	Pass
	Plug 20278-112R-13									
	0.1~3GHz		1.30 MAX.	10	-	1.075	1.10	1.06	0.011	Pass
	3~6GHz		1.50 MAX.	10	-	1.126	1.15	1.09	0.016	Pass
	6~9GHz		1.90 MAX.	10	-	1.204	1.25	1.17	0.027	Pass
	Plug 20278-112R-32									
	0.1~3GHz		1.30 MAX.	10	-	1.094	1.10	1.09	0.003	Pass
	3~6GHz		1.50 MAX.	10	-	1.181	1.19	1.17	0.008	Pass
	6~9GHz		1.60 MAX.	10	-	1.207	1.22	1.19	0.011	Pass
	Plug 20278-112R-18									
	0.1~3GHz		1.30 MAX.	10	-	1.172	1.19	1.15	0.011	Pass
	3~6GHz		1.50 MAX.	10	-	1.368	1.40	1.34	0.017	Pass
	6~9GHz		1.90 MAX.	10	-	1.428	1.46	1.36	0.025	Pass
	Receptacle									
	0.1~3GHz		1.30 MAX.	5	-	1.085	1.09	1.08	0.006	Pass
	3~6GHz		1.40 MAX.	5	-	1.233	1.27	1.18	0.033	Pass
	6~9GHz		1.80 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	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	5.86	7.5	4.1	1.21	Pass
	After testing	15 MAX.			5.19	6.8	4.4	0.77	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	6.08	6.4	5.6	0.28	Pass
	After testing	25 MAX.			6.44	6.9	6.2	0.24	Pass
	Contact resistance of ground contact								
	Initial	10 MAX.	10	mΩ	4.53	5.7	3.7	0.51	Pass
	After testing	15 MAX.			5.04	5.7	4.6	0.35	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	7.07	8.6	6.3	0.75	Pass
	After testing	25 MAX.			6.53	7.2	6.1	0.36	Pass
	Contact resistance of ground contact								
Initial	10 MAX.	10	mΩ	4.73	5.8	3.6	0.63	Pass	
After testing	15 MAX.			5.11	6.9	4.1	0.90	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	9.2	8.1	0.34	Pass	
After testing	25 MAX.			8.20	8.6	7.9	0.26	Pass	
Contact resistance of ground contact									
Initial	10 MAX.	10	mΩ	4.55	6.0	3.8	0.68	Pass	
After testing	15 MAX.			4.57	5.6	3.6	0.68	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



















