



RELIABILITY TEST REPORT

TEST ITEM :1.ELECTRICAL
2.MECHANICAL
3.ENVIRONMENTAL

SERIES NO. : 5W1、3W3、7W2、5W5、8W8、9W4、11W1、13W3、
13W6、17W5、17W2、21W1、21W4、24W7、25W3、
27W2、36W4、43W2、3W3C、C3W3、C5W5、C7W2、
C8W8and CHPT Series For Solder Cup Combination Coaxial
D-Sub Connector

TEST EQUIPMENT : 1. ELECTRONIC MEASURING APPARATUS
2. INSERTION & REMOVAL APPARATUS
3. ENVIRONMENTAL APPARATUS

DATE OF TESTING : 11/10/04”

TEST DEPART : QA

TESTER :Rita

CONTAIN : ATTACHED

REVIEWED : Pete APPROVED : Jackal VERIFIED : Rita

1. ELECTRICAL PERFORMANCE :

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
1-1	Signal contact resistance	Dry circuit of DC 20mV max., 100mA max.	Less than 10 mΩ	Sample	10 mΩ max.
				1	2.68 mΩ
				2	2.58 mΩ
				3	2.66 mΩ
				4	2.68 mΩ
				5	2.68 mΩ
1-2	Dielectric strength	When applied AC 1000V 1 minute between adjacent terminal	No change	Sample	1000 V 1 minute
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass
1-3	Insulation resistance	When applied DC 500 V between adjacent terminal or ground	More than 5000 MΩ	Sample	5000 MΩ min.
				1	
				2	
				3	
				4	
				5	

2. MECHANICAL PERFORMANCE :

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
2-1	Contact retaining force in insulator	Retention speed 25±3 mm per minute from housing	More than 4.5 Kgf	Sample	4.5 Kgf min.
				1	11.0 Kgf
				2	10.9 Kgf
				3	11.1 Kgf
				4	10.8 Kgf
				5	11.2 Kgf
2-2	Signal contact insertion force	Measure force to insertion using 1.04 mm test pin at speed 25±3 mm per minute	340 gram max. Per contact	Sample	340 gram max.
				1	233 gram
				2	230 gram
				3	232 gram
				4	229 gram
				5	236 gram
2-3	Signal contact withdrawal force	Measure force to withdrawal using 0.99 mm test pin at speed 25±3 mm per minute	28 gram min. Per contact	Sample	28 gram min.
				1	90 gram
				2	92 gram
				3	90 gram
				4	89 gram
				5	88 gram
2-4	Coaxial contact insertion force	Measure force to insertion using plug terminal at speed 25±3 mm per minute	2.0 Kgf max. Per contact	Sample	2.0 Kgf max.
				1	1.3 Kgf
				2	1.2 Kgf
				3	1.4 Kgf
				4	1.5 Kgf
				5	1.3 Kgf

2-5	Coaxial contact withdrawal force	Measure force to withdrawal using plug terminal at speed 25±3 mm per minute	0.5 Kgf min. Per contact	Sample	0.5 Kgf min.	
				1	0.7 Kgf	
				2	0.7 Kgf	
				3	0.8 Kgf	
				4	0.7 Kgf	
5	0.7 Kgf					
2-6	Mating and unmating force	Speed 25±3 mm per minute	17.0 Kgf max.	Sample	Mating	unmating
				1	13.8	9.9
				2	13.5	9.2
				3	13.4	9.3
				4	14.0	9.5
5	13.5	9.6				
2-7	Durability	Connector shall be subjected to 100 cycles of insertion and withdrawal	Contact resistance: Less than twice of initial for signal contact resistance	Sample	< twice of initial	
				1	2.70 mΩ	
				2	2.68 mΩ	
				3	2.65 mΩ	
				4	2.60 mΩ	
5	2.67 mΩ					

3. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
3-1	Temperature rise	Then carried the rated current	30 max.	Sample	30 max.
3-2	Vibration	1.5 mm 10-55-10 HZ/minute each 2 hours for X, Y and Z directions	Appearance: No damage Discontinuity: 1 micro second max.	Sample	No damage
				Sample	1 micro second max.
3-3	Solder ability	Soldering time: 5 ±0.5 sec. Soldering pot: 230 ±5	Minimum: 90% of immersed area	Sample	90% of Immersed area
				1	Pass
				2	Pass
				3	Pass
				4	Pass
5	Pass				
3-4	Heat aging	125 ±2 , 96 hours	Appearance: No damage	Sample	No damage
				1	Pass
				2	Pass
				3	Pass
				4	Pass
5	Pass				
3-5	Humidity	40 ±2 , 90-95%RH, 96 hours measurement must be taken within 30 min. after tested	Appearance: No damage	Sample	No damage
				1	Pass
				2	Pass
				3	Pass
				4	Pass
5	Pass				

			Contact resistance: Less than twice of initial for signal contact resistance	Sample < twice of initial 1 2.68 mΩ 2 2.66 mΩ 3 2.69 mΩ 4 2.63 mΩ 5 2.65 mΩ
			Dielectric strength: To pass pare1-2	Sample Pass para 1-2 1 Pass 2 Pass 3 Pass 4 Pass 5 Pass
3-6	Temperature cycling	One cycle consists of: 1. -55^{+0}_{-3} , 30 min 2. Room temp. 10-15 min 3. 85^{+3}_{-0} , 30 min 4. Room temp. 10-15 min	Appearance: No damage	Sample No damage 1 Pass 2 Pass 3 Pass 4 Pass 5 Pass
			Contact resistance: Less than twice of initial for signal contact resistance	Sample < twice of 1 2.70 mΩ 2 2.65 mΩ 3 2.66 mΩ 4 2.67 mΩ 5 2.69 mΩ
3-7	Salt spray	Temperature: $35\pm 3^{\circ}\text{C}$ Solution: $5\pm 1\%$ Spray time: 48 ± 4 hours Measurement must be taken after water rinse	Appearance: No damage	Sample No damage 1 Pass 2 Pass 3 Pass 4 Pass 5 Pass
			Contact resistance: Less than twice of initial for signal contact resistance	Sample < twice of initial 1 2.68 mΩ 2 2.70 mΩ 3 2.67 mΩ 4 2.68 mΩ 5 2.66 mΩ