



## 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 Board Mount 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 : Peter APPROVED : Ted 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	2.71 mΩ
				2	2.68 mΩ
				3	2.69 mΩ
				4	2.68 mΩ
				5	2.72 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	11.5 Kgf
				2	11.7 Kgf
				3	11.2 Kgf
				4	11.3 Kgf
				5	11.4 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	241 gram
				2	237 gram
				3	248 gram
				4	231 gram
				5	241 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	95 gram
				2	93 gram
				3	92 gram
				4	94 gram
				5	91 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	1.5 Kgf
				2	1.6 Kgf
				3	1.4 Kgf
				4	1.6 Kgf
				5	1.4 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	0.8 Kgf	
				2	0.8 Kgf	
				3	0.9 Kgf	
				4	0.7 Kgf	
5	0.8 Kgf					
2-6	Mating and unmating force	Speed 25±3 mm per minute	17.0 Kgf max.	Sample	Mating	unmating
				1	14.2	11.8
				2	13.9	10.5
				3	13.7	11.1
				4	14.1	10.7
5	13.7	10.6				
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	2.73 mΩ	
				2	2.72 mΩ	
				3	2.71 mΩ	
				4	2.74 mΩ	
5	2.74 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	Resistance to soldering heat	Soldering time: 5 ±0.5 sec. Soldering pot: 260 ±5	Appearance: No damage	Sample	No damage
				1	Pass
				2	Pass
				3	Pass
				4	Pass
5	Pass				
3-5	Heat aging	125 ±2 , 96 hours	Appearance: No damage	Sample	No damage
				1	Pass
				2	Pass
				3	Pass
				4	Pass
5	Pass				



3-6	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	2.73 mΩ
				2	2.72 mΩ
				3	2.71 mΩ
				4	2.74 mΩ
			Dielectric strength: To pass pare1-2	Sample	Pass para 1-2
				1	Pass
				2	Pass
				3	Pass
4	Pass				
5	Pass				
3-7	Temperature cycling	One cycle consists of: 1. -55 <sup>+0</sup> <sub>-3</sub> , 30 min 2. Room temp. 10-15 min 3. 85 <sup>+3</sup> <sub>-0</sub> , 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 initial
				1	2.71 mΩ
				2	2.73 mΩ
				3	2.72 mΩ
4	2.71 mΩ				
5	2.73 mΩ				
3-8	Salt spray	Temperature:35±3°C Solution:5±1% Spray time:48±4hours 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	2.74 mΩ
				2	2.75 mΩ
				3	2.75 mΩ
4	2.76 mΩ				
5	2.74 mΩ				