

**RELIABILITY TEST REPORT**

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

PART NO. : CF08 SERIES SMT CONNECTORS

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

DATE OF TESTING :04/22/06”

TEST DEPART :QA

TESTER :Scott.Lien

CONTAIN : ATTACHED

REVIEWED : Jackal APPROVED : Rita VERIFIED : Scott .

**1. ELECTRICAL PERFORMANCE :**

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
1-1	Contact resistance	Dry circuit of DC 20 mV max., 100 mA max.	Less than 20 mΩ	Sample	20 mΩ max.
				1	6.24 mΩ
				2	6.57 mΩ
				3	6.71 mΩ
				4	6.72 mΩ
				5	6.52 mΩ
1-2	Dielectric strength	When applied AC 500V 1 minute between adjacent terminal	No change	Sample	500 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 500 MΩ	Sample	500 MΩ min.
				1	$6 \times 10^4$ MΩ
				2	$7 \times 10^4$ MΩ
				3	$5 \times 10^4$ MΩ
				4	$5 \times 10^4$ MΩ
				5	$8 \times 10^4$ MΩ

**2. MECHANICAL PERFORMANCE :**

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
2-1	Contact retaining force in insulator	Retention speed $25 \pm 3$ mm per minute from housing	More than 0.5 Kgf	Sample	0.5 Kgf min.
				1	1.003 Kgf
				2	1.005 Kgf
				3	1.003 Kgf
				4	1.007 Kgf
				5	1.000 Kgf
2-2	FPC/FFC withdrawal force(Reference data)	Measure force to withdrawal using 0.30 mm thickness FPC/FFC at speed $25 \pm 3$ mm per minute	$40 \times$ No. of Circuits gram min.	Sample	(06P) 0.24Kgf min.
				1	0.380 Kgf
				2	0.395 Kgf
				3	0.366 Kgf
				4	0.334 Kgf
				5	0.324 Kgf
				Sample	(13P) 0.52Kgf min.
				1	0.792 Kgf
				2	0.789 Kgf
				3	0.792 Kgf
				4	0.787 Kgf
5	0.791 Kgf				

				Sample (32P) 1.28Kgf min.
				1 1.638 Kgf
				2 1.721 Kgf
				3 1.650 Kgf
				4 1.688 Kgf
				5 1.643 Kgf
2-3	Durability	Connector shall be subjected to 20 cycles of insertion and withdrawal	Contact resistance: Less than twice of initial	Sample < twice of initial
				1 6.65 mΩ
				2 6.76 mΩ
				3 6.71mΩ
				4 6.66 mΩ
				5 6.80 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
3-4	Resistance to soldering heat	Max. Infrared Reflow Soldering temperature & time : 230 for 60 sec 260 for 10 sec	Appearance: No damage	Sample	No damage
				1	Pass
				2	Pass
				3	Pass
				4	Pass
3-5	Heat aging	85 ±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	Sample	< twice of initial			
				1	6.81 mΩ			
				2	6.92 mΩ			
				3	6.85 mΩ			
				4	6.77 mΩ			
			Dielectric strength: To pass para 1-2	Sample	Pass para 1-2			
				1	Pass			
				2	Pass			
				3	Pass			
4	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	Sample	< twice of initial			
				1	7.04 mΩ			
				2	7.07 mΩ			
				3	6.99 mΩ			
				4	6.89 mΩ			
			3-8	Salt spray	Temperature: 35 ± 3 °C Solution: 5 ± 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	Sample	< twice of initial						
	1	6.96 mΩ						
	2	7.01 mΩ						
	3	6.91 mΩ						
	4	6.91 mΩ						
5	6.87 mΩ							