

RELIABILITY TEST REPORT

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

PART NO.: CF20 SERIES SMT TYPE CONNECTORS

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

DATE OF TESTING :04/14/06”

TEST DEPART :QA

TESTER :Scott.Lien

CONTAIN : ATTACHED

REVIEWED : Jackal APPROVED : Rita VERIFIED : Scott.Lien

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 30 mΩ	Sample	30 mΩ max.
				1	7.62 mΩ
				2	6.94mΩ
				3	7.32mΩ
				4	7.11mΩ
				5	6.81mΩ
1-2	Dielectric strength	When applied AC 250V 1 minute between adjacent terminal	No change	Sample	No change
				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 100 MΩ	Sample	100 MΩ min.
				1	30×10 ⁴ MΩ
				2	30×10 ⁴ MΩ
				3	25×10 ⁴ MΩ
				4	20×10 ⁴ MΩ
				5	25×10 ⁴ MΩ

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 0.2Kgf	Sample	0.2 Kgf min.
				1	0.418 Kgf
				2	0.410 Kgf
				3	0.420 Kgf
				4	0.415 Kgf
				5	0.422 Kgf
2-2	FPC/FFC withdrawal force(Reference data)	Measure force to withdrawal using 0.30 mm thickness FPC/FFC at speed 25 ± 3 mm per minute	Standard (0.02 x No. of Contacts) Kgf min.	Sample	(06P) 0.12 Kgf min.
				1	0.442 Kgf
				2	0.413 Kgf
				3	0.425 Kgf
				4	0.452 Kgf
				5	0.417 Kgf
				Sample	(22P) 0.44 Kgf min.
				1	1.82 Kgf
				2	1.87 Kgf
				3	1.75 Kgf
				4	1.65 Kgf
				5	1.58 Kgf
				Sample	(50P) 1.0 Kgf min.
				1	3.89 Kgf
				2	4.05 Kgf
3	3.94 Kgf				
4	3.79 Kgf				
5	3.97 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	7.66mΩ
				2	6.99mΩ
				3	7.35mΩ
				4	7.16mΩ
5	6.85mΩ				

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
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
			Contact resistance: Less than twice of initial	Sample	< twice of initial
				1	7.59 mΩ
				2	7.57 mΩ
				3	7.64 mΩ
				4	7.54 mΩ
5	7.63 mΩ				

			Dielectric strength: To pass para 1-2	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^{+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	Sample	< twice of initial
				1	7.62 mΩ
				2	7.57 mΩ
				3	7.54 mΩ
				4	7.56 mΩ
				5	7.63 mΩ
3-8	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	Sample	< twice of initial
				1	7.57 mΩ
				2	7.61 mΩ
				3	7.55 mΩ
				4	7.59 mΩ
				5	7.60 mΩ

11.AMBIENT TEMPERATURE RANGE : -25 to + 85