

ENGINEERING DEPT.		PRODUCT SPECIFICATION For CF65 Series Connector System	SPEC.NO.: SPCF079C
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1. SCOPE:

This product specification contains the test method the general performance and requirement for CF65 series connectors.

2. APPLICABLE DOCUMENTS:

Reference documents listed below shall be the latest revision unless otherwise specified. Should a conflict occur between this specification and any of the listed documents then this specification shall prevail.

2.1 Industry standards :

EIA-364-□□ electrical connector test procedures

3. SHAPE, CONSTRUCTION AND DIMENSIONS

See attached drawings

4. MATERIALS

See attached drawings

5. ACCOMMODATED P.C.BOARD

5.1 Thickness: 0.5 mm (.020") ~ 2.0 mm (.079")

5.2 P.C. Board Layout: See attached drawings

6. FPC/FFC RECOMMENDED SPECIFICATION:

Thickness : 0.3 ± 0.03 mm (.012 $\pm$.002")

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7. ELECTRICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
7.1	Rated current and voltage		Pitch 0.50mm: 0.5A 50V DC/ AC Pitch 1.00mm: 1.0A 125V DC/ AC
7.2	Contact Resistance	Measured at 20 mV maximum open circuit at 100mA .Mated test contacts must be in a connector housing. (EIA364-23)	Initially :20 mΩ Max. Finally :40 mΩ Max.
7.3	Dielectric strength	Test between adjacent contacts with a voltage of 250 VAC for 1 minute at Sea level. (EIA364-20 Method B)	No current leakage and flashover or damage detected.
7.4	Insulation Resistance	After 500 V DC for 1 minute , measure the insulation resistance between the adjacent contacts. (EIA364-21)	500 MΩ Min.

8. MECHANICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Contact retaining force in insulator	The end of terminal shall be pulled in a perpendicular to base housing at a maximum rate of 25.4 ± 3 mm per minute. (EIA 364-29)	0.10 Kgf Min.
8.2	FFC/FPC Retention Force	Apply axial load to FFC/FPC by operating at the speed rate of 25.4 ± 3 mm per minute.	0.03 Kgf/Pin Min.
8.3	Durability	Connector shall be subjected to 20 cycles of insertion and withdrawal	Appearance: No damage Contact Resistance : Less than 40 mΩ FFC/FPC retention force: 0.03 Kgf/Pin min

9. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
9.1	Temperature rise	Then carried the rated current	30°C max.



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	ITEM	TEST CONDITION	REQUIREMENT
9.2	Vibration	Subject mated FFC/FPC, All contacts shall be connected in series and DC 100mA shall be applied. Frequency:10~55 Hz Full amplitude1.5mm in 3 directions for 2 hours respectively. (EIA 364 – 28 Condition I)	Appearance: No damage Discontinuity: 1 micro second max.
9.3	Solder ability	Soldering time: 3 ± 0.5 second Soldering pot: $245 \pm 5^{\circ}\text{C}$	Minimum: 95% of immersed area
9.4	Resistance to soldering heat	Lead-Free Process for SMT Type: Refer Reflow temperature profile(4.1)	No damage
9.5	Hand Soldering Method	Use a soldering iron that has a sufficient head capacity and high stability of temperature. The tip of the iron should be shaped so as not to touch the part body directly. Temperature : $380 \pm 10^{\circ}\text{C}$ 3s	No damage
9.6	Heat aging	Subject unmated connectors to temperature life at $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 96 hours. (EIA 364 – 17 Test Condition III Method A)	Appearance : No damage Contact resistance shall meet requirement of 7.2
9.7	Humidity	Subject unmated connectors to 96 hours at 40°C with 90% to 95% RH. (EIA 364 – 31 Method II Test Condition A)	Appearance : No damage Contact resistance and insulation resistance shall meet requirement of 7.2, 7.4
9.8	Temperature cycling	Subject unmated connectors shall be tested in accordance with EIA364-32 Test Condition I . (1)- 55°C ,30 minute (2)+ 25°C ,5 minute (3)+ 85°C ,30 minute (4)+ 25°C ,5 minute consecutive 25 cycles.	Appearance: No damage Contact resistance shall meet requirement of 7.2



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	ITEM	TEST CONDITION	REQUIREMENT
9.9	Salt spray	Temperature: $35 \pm 3^{\circ}\text{C}$ Solution: $5 \pm 1\%$ Spray time: 48 ± 4 hours (Stamping before plated) Spray time: 24 ± 4 hours (Stamping after plated) Mate connectors and expose to the following salt mist conditions. Upon completion of the exposure period, salt deposits shall be removed by a gentle wash or dip in running water and dried naturally, after which the specified measurements shall be performed. The specimens shall be suspended from the top using waxed twine, string or nylon thread. The test only define the plating area, without plating area (as copper cross section) will not be defined. (EIA 364-26B / MIL-STD-202 Method 101)	Appearance: No damage Contact resistance: Less than twice of initial
	ITEM	TEST CONDITION	REQUIREMENT
9.10	Humidity, temperature cycling	In accordance with method MIL-STD-202 method 106 (without low frequency vibration). Subject mated connectors to 10 cycles 240h of humidity-temperature change between -10°C and 65°C at 95% R.H. in a chamber.	Insulation Resistance $500\text{M}\Omega$ MIN. Contact resistance: Less than twice of initial Dielectric Strength: No Breakdown.
9.11	Temperature life Cold (Cold Resistance)	In accordance with method IEC-60068-2-1. Temperature $-40 \pm 2^{\circ}\text{C}$ Duration 96 hours	Contact resistance: Less than twice of initial Appearance: No damage

10. Operating temperature range & Humidity Rating : -40°C to $+85^{\circ}\text{C}$, Humidity 95% Max.

Storage temperature range & Humidity Rating : -40°C to $+85^{\circ}\text{C}$, Humidity 95% Max.

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11.Recommended Temperature Profile(Lead-Free):

