

ENGINEERING DEPT.		PRODUCT SPECIFICATION For CF27 Series Connector System	SPEC.NO.: SPCF047B
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1. SCOPE:

This specification contains the test requirement of subject connectors when tested under the condition and inserted on the specified size FPC and FFC

2. APPLICABLE STANDARDS:

MIL - STD - 202	Methods for test of connectors for electronic equipment
EIA - 364	Test methods for electrical connectors
J-STD-020	Resistance to soldering Temperature for through hole Mounted Devices
SS-00254	Test methods for electronic components ,LEAD-FREE soldering Part design standards

3. APPLICABLE SERIES NO.: **CF27 Series**

4. SHAPE, CONSTRUCTION AND DIMENSIONS

See attached drawings

5. MATERIALS

See attached drawings

6. ACCOMMODATED P.C.BOARD

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

6.2 P.C. Board Layout: See attached drawings

7. ACCOMMODATED FPC/FFC THICKNESS

0.3 ± 0.03 mm (.012±.001")

REVIEWED : Eisley APPROVED : Sun VERIFIED : Michelle .



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8. ELECTRICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Rated current and voltage		0.5A max. 50V AC/DC max.
8.2	Contact resistance	Dry circuit of DC 20 mV max. , 10 mA max.	Less than 20 mΩ
8.3	Dielectric strength	When applied AC 500 V 1 minute between adjacent terminal	No change
8.4	Insulation resistance	When applied DC 500 V between adjacent terminal or ground	More than 50 MΩ

9. MECHANICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
9.1	Contact retaining force in insulator	Retention speed 25± 3 mm per minute from housing	More than 0.05 Kgf
9.2	FFC / FPC insert force (Reference data)	Measure force to insert using 0.30 mm thickness FPC / FFC at speed 25± 3 mm per minute	(0.1× no. of Contacts) Kgf max.
9.3	FFC / FPC withdrawal force (Reference data)	Measure force to withdrawal using 0.30 mm thickness FPC / FFC at speed 25± 3 mm per minute	(0.035× no. of Contacts) Kgf min.
9.4	Durability	Connector shall be subjected to 20 cycles of insertion and withdrawal	Contact resistance: Less than 40 mΩ

10. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
10.1	Temperature rise	Then carried the rated current	30°C max.
10.2	Vibration	1.5 mm 10-55-10 HZ / minute each 2 hours for X , Y and Z directions	Appearance: No damage Contact resistance : Less than 40 mΩ Discontinuity: 1 micro second max.
10.3	Solder ability	Soldering time: 3 ± 0.5 second Soldering pot: 245 ± 5°C	Minimum: 90% of immersed area



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	ITEM	TEST CONDITION	REQUIREMENT
10.4	Resistance to soldering heat	Soldering time: 20 second Max. Soldering pot: 250~260°C Refer Reflow temperature profile(12.1)	No damage
10.5	Hand Sodering Method	Use a soldering iron that has a sufficient head capacity and stability of temperature. The tip of iron should be shaped so as not to touch the part body directly. Temperature : 370~400°C 5 Sec. Max.	No damage
10.6	Heat aging	85 ± 2°C , 96 hours	Appearance: No damage Contact resistance: Less than 40 mΩ
10.7	Cold Resistance	-40 ± 3°C , 96 hours	Appearance: No damage Contact resistance: Less than 40 mΩ
10.8	Humidity	60 ± 2°C , 90-95% RH , 96 hours measurement must be taken within 60 min. after tested	Appearance: No damage Contact resistance: Less than 40 mΩ Dielectric strength: To pass para 8-3 Insulation resistance: More than 20 MΩ
10.9	Temperature cycling	One cycle consists of : (1) -55 ⁺⁰ ₋₃ °C , 30 min. (2) Room temp. 10-15 min. (3) 85 ⁺³ ₋₀ °C , 30 min. (4) Room temp. 10-15 min. Connector shall be mated with applicable FPC/FFC, and subjected to the conditions for 5 cycles.	Appearance: No damage Contact resistance: Less than 40 mΩ

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	ITEM	TEST CONDITION	REQUIREMENT
10.10	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 $40\text{ m}\Omega$

11. AMBIENT TEMPERATURE RANGE: -25 to $+85^{\circ}\text{C}$

12. Recommended IR Reflow Temperature Profile:

12.1 Using Typical Solder Paste

