

<b>ENGINEERING DEPT.</b>		<b>PRODUCT SPECIFICATION</b> <b>For CF10 Series Connector System</b>	<b>SPEC.NO.: SPCF016H</b>
<b>REVISIONS</b>	<b>ECN11064</b>		<b>PAGE: 1/5</b>

**D1. 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
MIL - STD - 1344	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. APPLCIABLE SERIES NO.: CF10 Series**

**4. SHAPE, CONSTRUCTION AND DIMENSIONS**

See attached drawings

**5. MATERIALS**

See attached drawings

**6. ACCOMMODATED P.C.BOARD**

6.1 Thickness: 1.6 mm (.063")  
6.2 P.C. Board Layout: See attached drawings

**7. ACCOMMODATED FPC/FFC THICKNESS**

0.3 +0.04/-0.01 mm (.012+.002/-0")



REVIEWED : David APPROVED : Eisley VERIFIED : Sandy .

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**8. ELECTRICAL PERFORMANCE:**

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Rated current and voltage		0.5 A 100V AC (r.m.s.)
8.2	Contact resistance	Dry circuit of DC 20 mV max., 100 mA max.	Less than 30 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 500 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 0.3 Kgf ( 2.94N )
9.2	FPC / FFC withdrawal force (Reference data)	Measure force to withdrawal using 0.30 mm thickness FPC/FFC at speed 25± 3 mm per minute	Over 10 Circuits: (0.2 + 0.04 × No. of Circuits) Kgf Min (1.96 + 0.392. × No. of Circuits) N Min.
			Under 10 Circuits: (0.1 + 0.04 × No. of Circuits) Kgf Min. (0.98+ 0.392. × No. of Circuits) N Min.
9.3	Durability	Connector shall be subjected to 20 cycles of insertion and withdrawal	Contact resistance: Less than twice of initial

**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 Discontinuity: 1 micro second max.

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10.3	Solder ability	<p><b>DIP Type Tin-Lead Process:</b> Soldering time: 5 ± 0.5 second Soldering pot: 230 ± 5°C</p> <p><b>DIP Type Lead-Free Process:</b> Soldering time: 3 ± 0.5 second Soldering pot: 245 ± 5°C</p> <p><b>SMT Type Tin-Lead Process:</b> Soldering time: 5 ± 0.5 second Soldering pot: 230 ± 5°C</p> <p><b>SMT Type Lead-Free Process:</b> Soldering time: 3 ± 0.5 second Soldering pot: 245 ± 5°C</p>	Minimum: 90% of immersed area
10.4	Resistance to soldering heat	<p><b>DIP Type Tin-Lead Process:</b> Soldering time: 5 ± 0.5 second Soldering pot: 240 ± 5°C</p> <p><b>DIP Type Lead-Free Process (JESD22-B106C):</b> Soldering time: 5 ± 0.5 second Soldering pot: 260 ± 5°C</p> <p><b>SMT Type Tin-Lead Process:</b> Refer Reflow temperature profile(11.1) Soldering time: 10 second Max. Soldering pot: 230 ± 5 °C</p> <p><b>SMT Type Lead-Free Process:</b> Soldering time: 20 second Max. Soldering pot: 250~260°C Refer Reflow temperature profile(11.2)</p>	No damage
10.5	Heat aging	105 ± 2°C , 96 hours	No damage
10.6	Humidity	40 ± 2°C , 90-95% RH , 96 hours measurement must be taken within 30 min. after tested	Appearance: No damage Contact resistance: Less than twice of initial Dielectric strength: To pass para 8-3

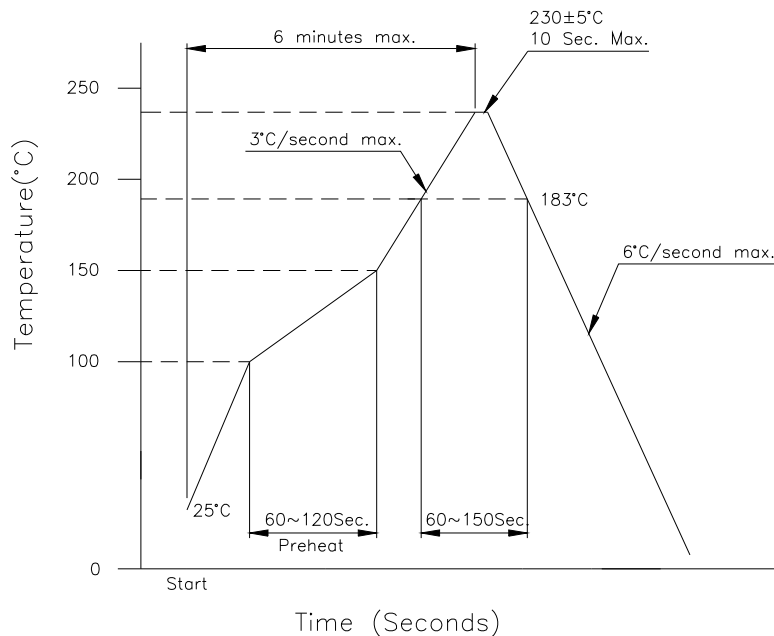
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	ITEM	TEST CONDITION	REQUIREMENT
10.7	Temperature cycling	One cycle consists of : (1) $-40_{-3}^{+0}$ °C , 30 min. (2) Room temp. 10-15 min. (3) $105_{-0}^{+3}$ °C , 30 min. (4) Room temp. 10-15 min.	Appearance: No damage Contact resistance: Less than twice of initial
10.8	Salt spray	Temperature: $35 \pm 3^{\circ}\text{C}$ Solution: $5 \pm 1\%$ Spray time: $48 \pm 4$ hours Measurement must be taken after water rinse	Appearance: No damage Contact resistance: Less than twice of initial

11. AMBIENT TEMPERATURE RANGE: -40 to +105°C

12. Recommended IR Reflow Temperature Profile:

12.1 Using Typical Solder Paste



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### 12.2 Using Lead-Free Solder Paste

