

| ENGINEERING DEPT. | | PRODUCT SPECIFICATION | SPEC.NO.: | SPCF085B |
|-------------------|------------|----------------------------|-----------|----------|
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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

EAI - 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.: CF11***D0*C-10-NH

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

0.29~0.34 mm (.011"~.013"mm)



REVIEWED: <u>Eisley</u> APPROVED: <u>Sun</u> VERIFIED: <u>Michelle</u>.



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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., 1 mA max. | Less than $40 \text{ m}\Omega$ |
| 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 M Ω |

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 50 gf |
| 9.2 | FFC / FPC withdrawal force (Reference data) | Measure force to withdrawal using 0.30 mm thickness FPC / FFC at speed 25 ± 3 mm per minute | 1+(0.03× no. of Contacts) Kgf min. |
| 9.3 | Durability | Connector shall be subjected to 30 cycles of insertion and withdrawal | Appearance: No damage 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. |
| 10.3 | Solder ability | Soldering time: 3 ± 0.5 second Soldering pot: 245 ± 5 °C | Minimum: 90% of immersed area |
| 10.4 | Resistance to soldering heat | Soldering time: 20 second Max. Soldering pot: 250~260°C | No damage |
| 10.5 | Heat aging | 85 ± 2 °C, 96 hours | No damage |



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| | ITEM | TEST CONDITION | REQUIREMENT |
|------|---------------------|---|--|
| 10.6 | Humidity | $40\pm2^{\circ}\text{C}$, 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 |
| 10.7 | Temperature cycling | One cycle consists of: (1) -55 ₋₃ °C, 30 min. (2)Room temp. 10-15 min. (3) 85 ₋₀ °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 ± 3 °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 |

11. AMBIENT TEMPERATURE RANGE: -40 to +85°C



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12. Recommended IR Reflow Temperature Profile(Lead-Free):

