ENGINEERING DEPT.		PRODUCT SPECIFICATION	SPEC.NO.: SPCF102A
REVISIONS	—	For CF88 Series Connector System	PAGE: 1/7

1. SCOPE:
This product specification contains the test method the general performance and requirement for CF88 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±.002″).

REVIEWED : Phil APPROVED : Steve VERIFIED : Hero .

7. ELECTRICAL PERFORMANCE:

ENGINEERING DEPT.		PRODUCT SPECIFICATION	SPEC.NO.: SPCF102A
REVISIONS	—	For CF88 Series Connector System	PAGE: 2/7

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

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 mm per minute. Test as per EIA 364-29	More than 0.3 Kgf
8.2	FFC/FPC Retention Force	Apply axial load to FFC/FPC by operating at the speed rate of 25 mm per minute.	Contact retention+ Lock retention: Initially : 0.02Kgf/PIN + 0.2Kgf Min. Finally : 0.02Kgf/PIN+ 0.1Kgf Min.
8.3	Durability	Mate applicable FFC/FPC and insert and withdraw actuator at the speed rate of 25 mm per minute. Times :Up to30 cycles.	Appearance: No damage Contact Resistance： 40 mΩ Max. FFC/FPC Retention Force: 0.02Kgf/PIN Min.+0.1Kgf Min.
8.4	Fitting Nail Retention Force	Apply axial pull out of force at the speed of 25 mm per minute on the fitting nail assembled in the housing.	More than 0.02 Kgf

9. ENVIRONMENTAL PERFORMANCE:

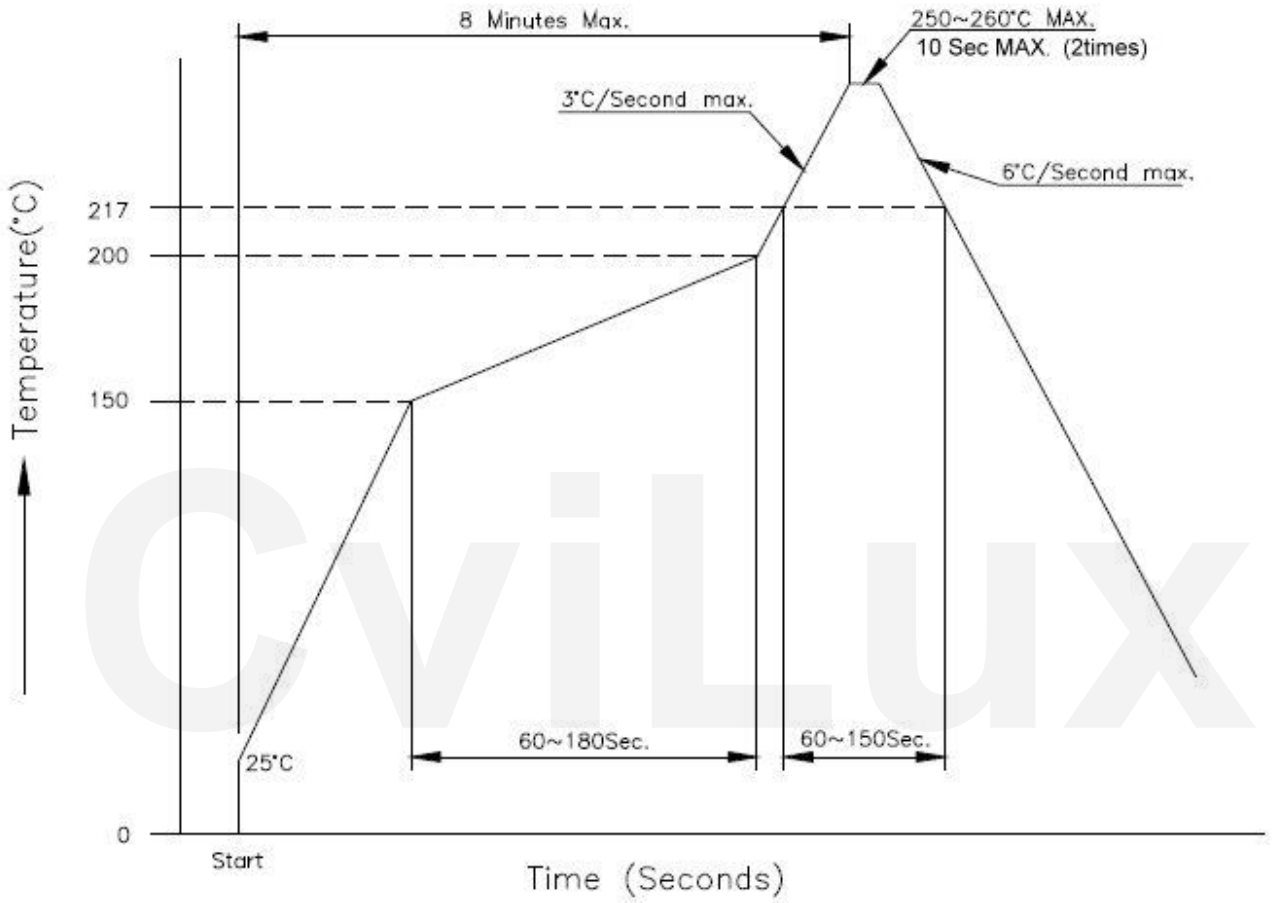
	ITEM	TEST CONDITION	REQUIREMENT
9.1	Temperature rise	The object of this test procedure is to detail a standard method to assess the current carrying capacity of mated battery connector contact. Test as per EIA364-70 Method B	0.5 A per pin minimum. The temperature rise above ambient shall not exceed 30℃ at any point in the connector when contact positions are powered. The ambient condition is still air at 25℃
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. Test as per EIA 364 – 28 Condition Ⅰ.	Appearance: No damage Discontinuity: 1 micro second max.
9.3	Physical Shock	Subject mated FFC/FPC to 50 g's half-sine shock pulses of 11ms duration. Three shocks in each direction applied along three mutually perpendicular planes for a total of 18 shocks. Test as per EIA364-27 condition A	Appearance: No damage Discontinuity: 1 micro second max.
9.4	Solderability	Steam age 1 hour at 90℃～96℃ Solder time to be 5±1 seconds at 245℃, using unactivated flux. Test as per EIA364-52	Minimum: 95% of immersed area
9.5	Resistance to soldering heat	Soldering time: 10 second , 2times Soldering pot: 250~260°C max.	No damage
9.6	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±10℃ 3s	No damage

ENGINEERING DEPT.		PRODUCT SPECIFICATION	SPEC.NO.: SPCF102A
REVISIONS	—	For CF88 Series Connector System	PAGE: 4/7

	ITEM	TEST CONDITION	REQUIREMENT
9.7	Heat aging	Subject unmated connectors to temperature life at 85℃±2℃ for 96 hours. Test as per EIA 364 – 17 Test Condition Ⅲ Method A.	Appearance：No damage Contact resistance： 40 mΩ Max.
9.8	Humidity	Subject unmated connectors to 96 hours at 40℃ with 90% to 95% RH. Test as per EIA 364 – 31 Method Ⅱ Test Condition A.	Appearance：No damage Contact resistance and insulation resistance shall meet requirement of 7.2 , 7.4
9.9	Temperature cycling	Subject unmated connectors shall be tested in accordance with EIA364–32 Test Condition Ⅰ. (1)-55℃,30 minute (2)+25℃,5 minute (3)+85℃,30 minute (4)+25℃,5 minute consecutive 10 cycles.	Appearance: No damage Contact resistance： 40 mΩ Max.
9.10	Mixed Flowing Gas	There shall be no change in contact resistance greater than 20 mΩ from initial when mated specimens are subjected to environmental class Ⅱ. Test as per EIA364-65 for 4 days mated. Relative Humidity：70±2% Relative Temp.：30±2℃ Pollutant Concentration： Cl2：10±3 ppb NO2：200±50 ppb H2S：10±5 ppb	Appearance: No damage Contact resistance： 40 mΩ Max.

10.Operating temperature range：-40℃ to +85℃; Storage temperature range：-40℃ to +85℃

11.Recommended Temperature Profile(Lead-Free):

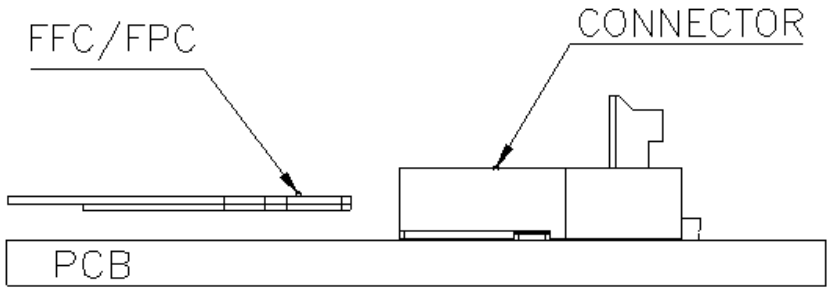


(Reflow 2 cycles)

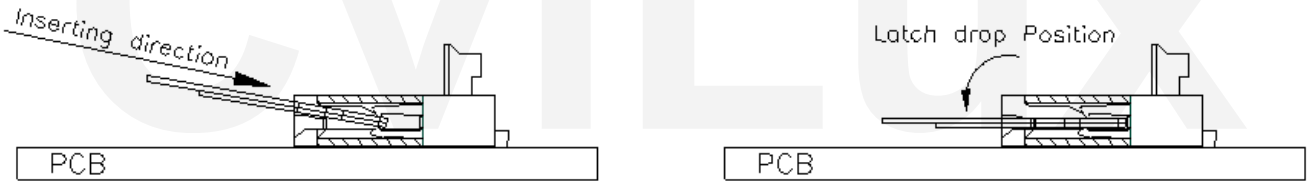
12. OPERATING INSTRUCTIONS AND PRECAUTIONS:

12.1 Operating instruction

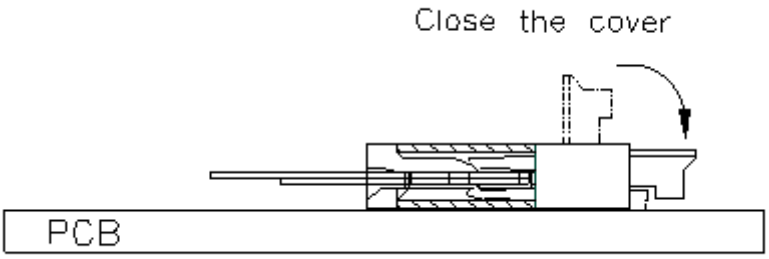
12.1.1 Lift up the actuator. Use thumb or forefinger.



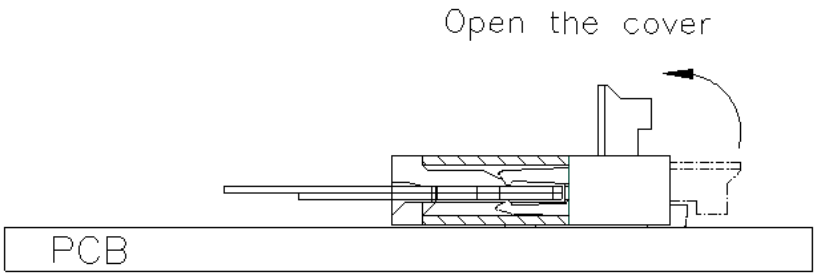
12.1.2 Fully insert the FFC/FPC in the connector parallel to mounting surface, with the exposed conductive traces facing down. And ensure that the FFC/FPC is properly inserted into the connector insertion slot.



12.1.3 Rotate down the actuator until firmly closed. It is critical that the inserted FFC/FPC is not moved and remains fully inserted.



12.1.4 Lift up the actuator and pull out the FFC/FPC after the lock is released.



12.2 Precautions for use

Do not apply force in the upward direction (as illustrated). Do not bend the FPC/FFC too close to the actuator.