



ENGINEERING DEPT.		PRODUCT SPECIFICATION For CF87 Series Connector System(Lock Type)	SPEC.NO.: SPCF105B
REVISIONS	ECNT120150		PAGE: 1/6

1. SCOPE::

This specification contains the test requirement of subject connectors when tested under the condition and below standards base on CviLux test procedure

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.: **CF87 Series** (CF87***H0R*-**-NH)

4. SHAPE, CONSTRUCTION AND DIMENSIONS

See attached drawings

5. MATERIALS

See attached drawings

6. ACCOMMODATED P.C.BOARD

0.8 mm (.031") ~ 1.6 mm (.063")

7.FFC/FPC RECOMMENDED SPECIFICATION:

Thickness:0.3±0.03mm(.012±.001")

REVIEWED : Eisley APPROVED : Sun VERIFIED : Jessie .

ENGINEERING DEPT.		PRODUCT SPECIFICATION For CF87 Series Connector System(Lock Type)	SPEC.NO.: SPCF105B
REVISIONS	ECNT120150		PAGE: 2/6

8. ELECTRICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Rated current and voltage		0.5A 50V AC/DC Max.
8.2	Contact Resistance	Measured at 20 mV maximum open circuit at 1mA .Mated test contacts must be in a connector housing. (EIA364-23)	Initially : 40 mΩ Max. Finally : $\Delta R=20$ mΩ Max. after test.
8.3	Dielectric strength	Test between adjacent contacts with a voltage of 250 VAC for 1 minute at Sealevel. (EIA364-20 Method B)	No current leakage and flashover or damage detected.
8.4	Insulation Resistance	After 500 VDC for 1 minute , measure the insulation resistance between the adjacent contacts. (EIA364-21)	500 MΩ Min.

9. MECHANICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
9.1	Contact retaining force in insulator	Pull the contact at a rate of 25 ± 3 mm per minute	0.08Kgf (0.9N) Min.
9.2	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 0.10 Kgf
9.3	FFC/FPC Retention Force	Apply axial load to FFC/FPC by operating at the speed rate of 25 ± 3 mm/min.	Initially : 0.015 Kgf(0.15N)xContact.No +0.2Kgf(2.0N) Min. Finally : 0.015 Kgf(0.15N)xContact.No +0.1Kgf(1.0N) Min
9.4	Durability	Mate applicable FFC/FPC and insert and withdraw actuator at the speed rate of 25 ± 3 mm/min. Times : 20 cycles.	Appearance: No damage Contact resistance shall meet requirement of 7.2

ENGINEERING DEPT.		PRODUCT SPECIFICATION For CF87 Series Connector System(Lock Type)	SPEC.NO.: SPCF105B
REVISIONS	ECNT120150		PAGE: 3/6

10. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
10.1	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	The temperature rise above ambient shall not exceed 30°C at any point in the connector when contact positions are powered.
10.2	Vibration	Subject mated FFC/FPC, All contacts shall be connected in series and DC 100mA shall be applied. Frequency:10~ 55~10 Hz in 1 minute. Full amplitude1.5mm in 3 directions for 2 hours respectively. (EIA 364 – 28 Condition I)	Appearance: No damage Discontinuity: 1 micro second max. Contact resistance shall meet requirement of 7.2
10.3	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 19 shocks. (EIA364-27 condition A)	Appearance: No damage Contact resistance shall meet requirement of 7.2 Discontinuity: 1 micro second max.
10.4	Heat aging	Subject unmated connectors to temperature life at 85°C±2°C for 96 hours. Test as per EIA 364 – 17 Test Condition III Method A.	Appearance : No damage Contact resistance shall meet requirement of 7.2
10.5	Humidity	Subject unmated connectors to 120 hours at 40±2°C with 90% to 95% RH. (EIA 364 – 31 Method II Test Condition A)	Appearance : No damage Contact resistance shall meet requirement of 7.2 Insulation resistance: 100 MΩ min.
10.6	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 5 cycles.	Appearance: No damage Contact resistance shall meet requirement of 7.2 Insulation resistance: 100 MΩ min.

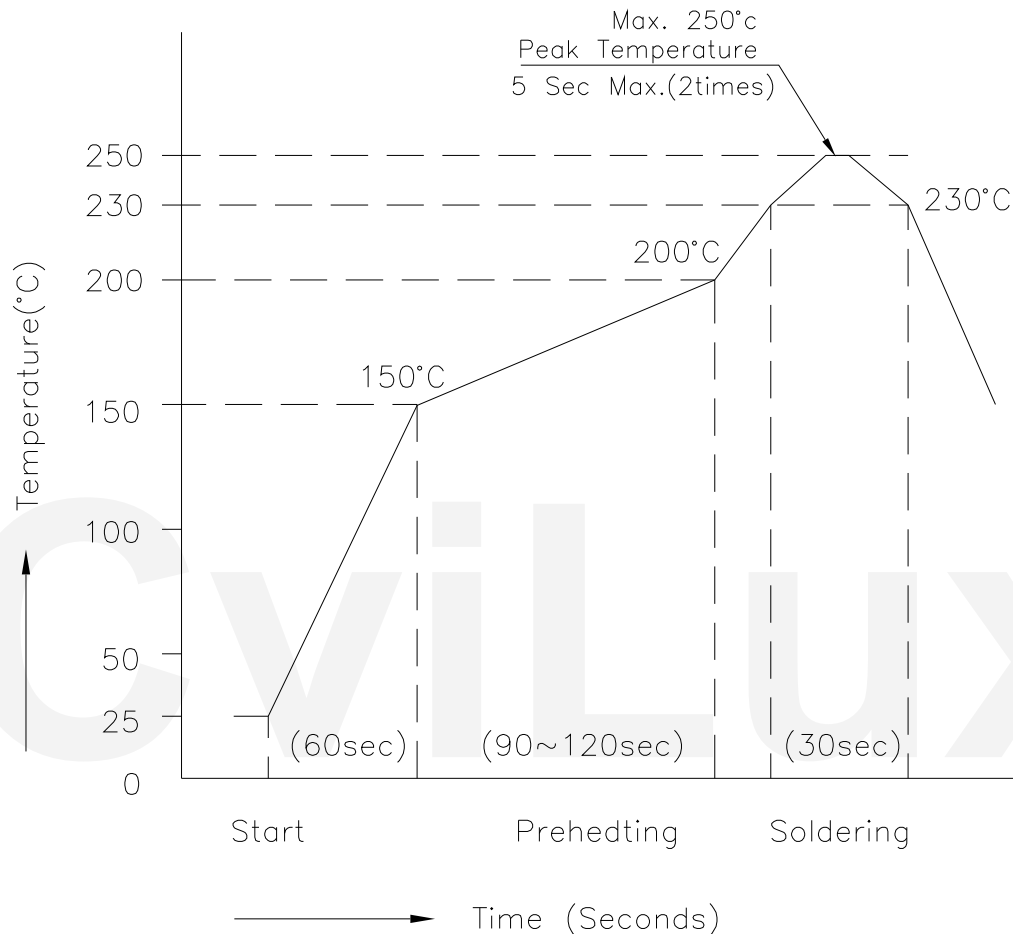
ENGINEERING DEPT.		PRODUCT SPECIFICATION For CF87 Series Connector System(Lock Type)	SPEC.NO.: SPCF105B
REVISIONS	ECNT120150		PAGE: 4/6

	ITEM	TEST CONDITION	REQUIREMENT
10.7	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
10.8	Solder ability	Soldering time: 3 ± 0.5 second Soldering pot: $245 \pm 5^{\circ}\text{C}$ (EIA364-52)	Minimum: 95% of immersed area
10.9	Resistance to soldering heat	Soldering time: 20 second Max. Soldering pot: $250 \sim 260^{\circ}\text{C}$ Refer Reflow temperature profile(12.1)	No damage

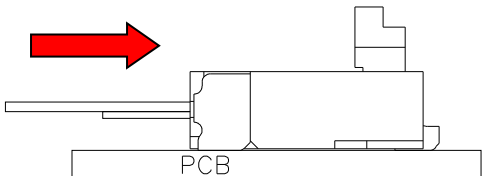
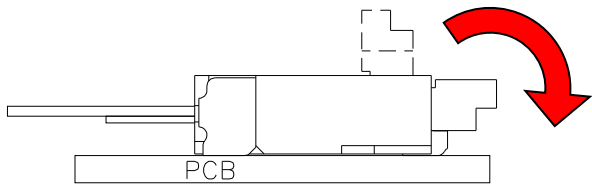
11. Operating temperature range : -55°C to $+85^{\circ}\text{C}$
Storage temperature range : -10 to $+^{\circ}\text{C}$ 50°C

ENGINEERING DEPT.		PRODUCT SPECIFICATION For CF87 Series Connector System(Lock Type)	SPEC.NO.: SPCF105B
REVISIONS	ECNT120150		PAGE: 5/6

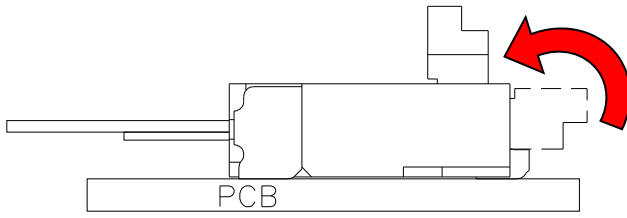
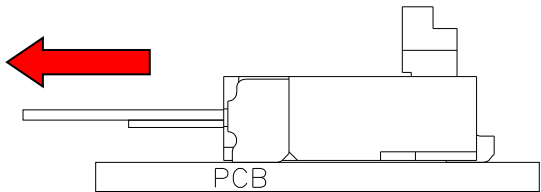
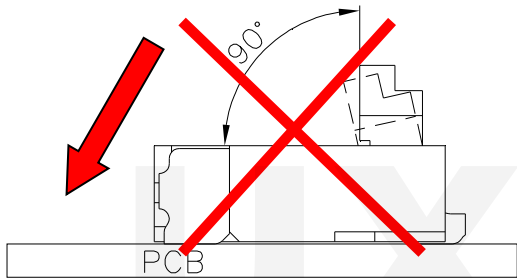
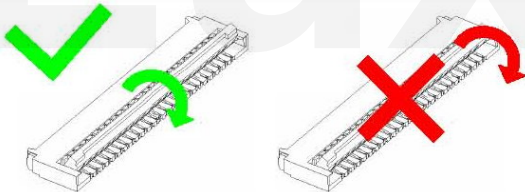
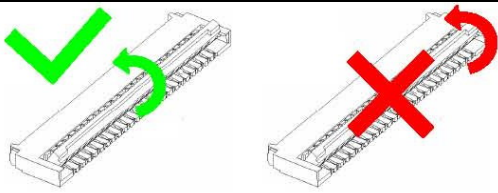
12. Recommended Temperature Profile(Lead-Free):



13. OPERATING INSTRUCTIONS AND PRECAUTIONS:

Joining step 1 : FPC gets along with conductivly facing up . The parallel one inserts it in the connector .	
Joining step 2 : Press the actuator lightly and rotate down to make a reservation , until FPC is totally inserted and not moved .	

ENGINEERING DEPT.		PRODUCT SPECIFICATION For CF87 Series Connector System(Lock Type)	SPEC.NO.: SPCF105B
REVISIONS	ECNT120150		PAGE: 6/6

Joining step 3 : FPC removal 1.) Lift the actuator carefully 2.) withdraw FPC from .	
	
Warning!! The whirling angle can't be greater than 90 degrees.	
Warning!! The strength of exerting pressure should be average and pushing actuator at the center.	
Warning!! Lift the area overlayed, should be average and lifting actuator at the center.	
Warning!! Operation of the actuator before mounting on the PCB is not recommended.	