瀚荃股份有限公司
CviLux Corporation

ENGINEERING DEPT.		PRODUCT SPECIFICATION	SPEC.NO.: SPCF075A
REVISIONS	-	For CF42 Series Connector System	PAGE: 1/6

CVILUX CORP
2014.09.12
ISSUED

1. SCOPE:
This product specification contains the test method the general performance and requirement for CF42 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±.001″)

REVIEWED : Jerry APPROVED : Francis VERIFIED : Claire .

ENGINEERING DEPT.		PRODUCT SPECIFICATION	SPEC.NO.: SPCF075A
REVISIONS	-	For CF42 Series Connector System	PAGE: 2/6

7. ELECTRICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
7.1	Rated current and voltage		0.5A DC 50V AC
7.2	Contact Resistance	Measured at 20 mV maximum open circuit at 1mA .Mated test contacts must be in a connector housing. (EIA364-23)	Initially : 30 mΩ Max. Finally : 60 mΩ Max. after test.
7.3	Dielectric strength	Test between adjacent contacts with a voltage of 250 DC for 1 minute at Sea level. (EIA364-20 Method B)	No current leakage and flashover or damage detected.
7.4	Insulation Resistance	After 100 V DC for 1 minute , measure the insulation resistance between the adjacent contacts. (EIA364-21)	500 MΩ Min.

8. MECHANICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Contact retaining force in insulator	Pull the contact at a rate of 25±3mm per minute	0.08Kgf (0.8N) Min.
8.2	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
8.3	FFC/FPC Retention Force	Apply axial load to FFC/FPC by operating at the speed rate of 25± 3 mm/min.	0.015 Kgf (0.15N)/ Pin Min.
8.4	Durability	Mate applicable FFC/FPC and insert and withdraw actuator at the speed rate of 25± 3mm/min. Times :Up to 20 cycles.	Appearance: No damage Contact resistance shall meet requirement of 7.2

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	The temperature rise above ambient shall not exceed 30℃ at any point in the connector when contact positions are powered.
9.2	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	Appearance: No damage Discontinuity: 1 micro second max. Contact resistance shall meet requirement of 7.2

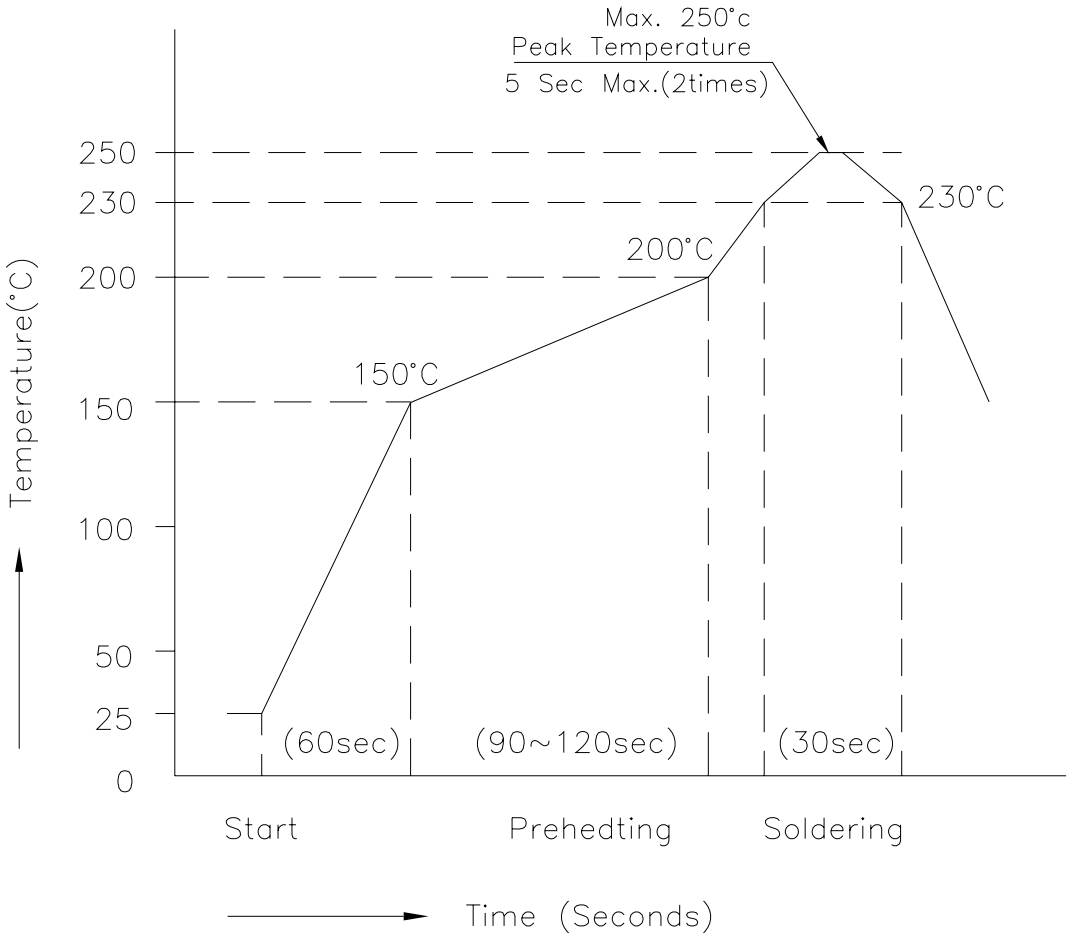
		2 hours respectively. (EIA 364 – 28 Condition Ⅰ)	

	ITEM	TEST CONDITION	REQUIREMENT
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. (EIA364-27 condition A)	Appearance: No damage Contact resistance shall meet requirement of 7.2 Discontinuity: 1 micro second max.
9.4	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 shall meet requirement of 7.2
9.5	Humidity	Subject unmated connectors to 96 hours at 40±2℃ 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: 500 MΩ min.
9.6	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 shall meet requirement of 7.2
9.7	Salt Spray	Unmated connectors shall be tested in accordance with EIA364-26 Condition B. Temperature：35℃±2℃ Density：5±1% in weight Duration：48hours	Appearance：No damage
9.8	Solder ability	Soldering time: 3±0.5 second Soldering pot: 250°C (EIA364-52)	Minimum: 95% of immersed area
9.9	Resistance to soldering heat	Reflow soldering (Infrared): Refer soldering method The conditions specified on the recommended temperature profile Shall be repeated twice.	No damage
		Hand Soldering Method Soldering time: 5 seconds Max. Solder temperature :360°C±5°C	

ENGINEERING DEPT.		PRODUCT SPECIFICATION	SPEC.NO.: SPCF075A
REVISIONS	-	For CF42 Series Connector System	PAGE: 4/6

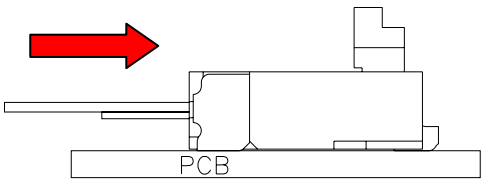
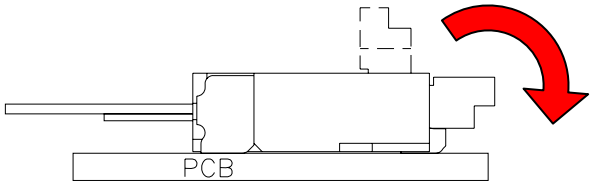
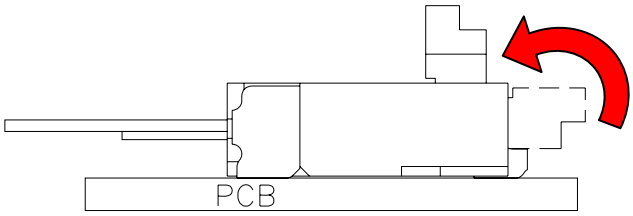
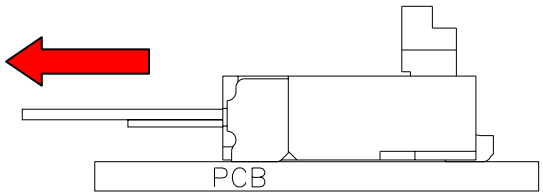
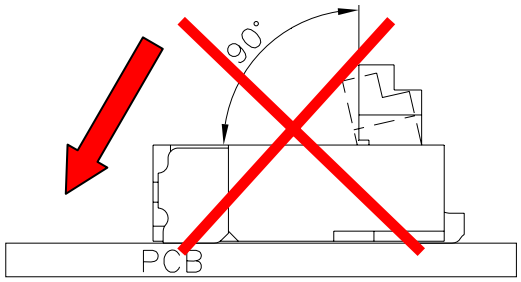
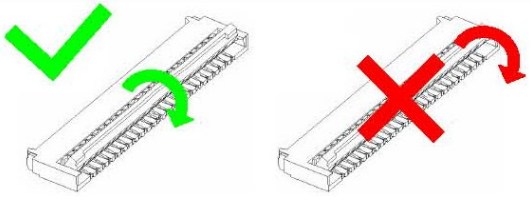
10.Operating temperature range：-55℃ to +85℃
Storage temperature range：-10℃ to +50℃

11. Recommended Temperature Profile(Lead-Free):

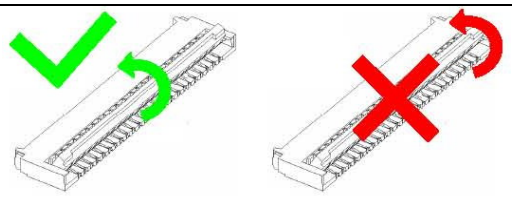


ENGINEERING DEPT.		PRODUCT SPECIFICATION	SPEC.NO.: SPCF075A
REVISIONS	-	For CF42 Series Connector System	PAGE: 5/6

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 .	
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.	

ENGINEERING DEPT.		PRODUCT SPECIFICATION	SPEC.NO.: SPCF075A
REVISIONS	-	For CF42 Series Connector System	PAGE: 6/6

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.