瀚荃股份有限公司
CviLux Corporation

CVILUX
2020.07.31
ISSUED

ENGINEERING DEPT.		PRODUCT SPECIFICATION For CI44 Series Connector System	SPEC.NO.: SPCI028J
REVISIONS	ECNT120150 ECNT112189		PAGE: 1/6

1. SCOPE:
This specification contains the test requirement of subject connectors when tested under the condition and procedure with terminals crimped on the specified maximum size wire

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: CI44 Series

4. SHAPE, CONSTRUCTION AND DIMENSIONS
See attached drawings

5. MATERIALS
See attached drawings

6. ACCOMMODATED P.C.BOARD
6.1 Thickness: 0.4 mm (.016″) ~ 0.6 mm (.024″)
6.2 P.C. Board Layout: See attached drawings

REVIEWED : Eisley APPROVED : Sun VERIFIED : Michelle .

7. ELECTRICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT		
7.1	Rated current and voltage		AWG # 28	1A	125V AC/ DC
			AWG # 30	1A	
			AWG # 32	0.8A	
7.2	Contact resistance	Dry circuit of DC 20 mV max. , 10 mA max.	Less than 20 mΩ		
7.3	Dielectric strength	When applied AC 250 V 1 minute between adjacent terminal	No change		
7.4	Insulation resistance	When applied DC 500 V between adjacent terminal or ground	More than 100 MΩ		

8. MECHANICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Wire size	Specified wire size	Accepts AWG#28~#32
8.2	Terminal crimp Tensile strength	When crimped AWG#28 size wire When crimped AWG#30 size wire When crimped AWG#32 size wire	More than 1.3 Kgf More than 0.8 Kgf More than 0.6 Kgf
8.3	Terminal insertion force	Insertion speed 25± 3 mm per minute into housing	Less than 400 gram
8.4	Contact retaining force in insulator	Retention speed 25± 3 mm per minute from housing	More than 0.7 Kgf
8.5	Single contact insertion force	Measure force to insertion using pin of header at speed 25± 3 mm per minute	600 gram max.
8.6	Single contact withdrawal force	Measure force to withdrawal using pin of header at speed 25± 3 mm per minute	70 gram min.
8.7	Durability	Connector shall be subjected to 30 cycles of insertion and withdrawal	Contact resistance: Less than twice of initial
8.8	Pin retention force	Push pin from insulator base at speed 25± 3 mm per minute	Straight DIP Type: More than 0.4 Kgf
			Other Type: More than 0.8 Kgf

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8.9 Mating & Unmating

	Mating Force (Max.)			Unmating Force (Min.)		
	1st	6th	30th	1st	6th	30th
2 Pin	2.0 Kgf	1.8 Kgf	1.6 Kgf	0.28 Kgf	0.23 Kgf	0.18 Kgf
3 Pin	2.5 Kgf	2.3 Kgf	2.1 Kgf	0.30 Kgf	0.25 Kgf	0.20 Kgf
4 Pin	3.0 Kgf	2.8 Kgf	2.6 Kgf	0.33 Kgf	0.28 Kgf	0.23 Kgf
5 Pin	3.5 Kgf	3.3 Kgf	3.1 Kgf	0.38 Kgf	0.33 Kgf	0.28 Kgf
6 Pin	4.0 Kgf	3.8 Kgf	3.6 Kgf	0.43 Kgf	0.38 Kgf	0.33 Kgf
7 Pin	4.5 Kgf	4.3 Kgf	4.1 Kgf	0.48 Kgf	0.43 Kgf	0.38 Kgf
8 Pin	5.0 Kgf	4.8 Kgf	4.6 Kgf	0.53 Kgf	0.48 Kgf	0.43 Kgf
9 Pin	5.5 Kgf	5.3 Kgf	5.1 Kgf	0.56 Kgf	0.51 Kgf	0.46 Kgf
10 Pin	6.0 Kgf	5.8 Kgf	5.6 Kgf	0.59 Kgf	0.54 Kgf	0.49 Kgf
11 Pin	6.5 Kgf	6.3 Kgf	6.1 Kgf	0.62 Kgf	0.57 Kgf	0.52 Kgf
12 Pin	7.0 Kgf	6.8 Kgf	6.6 Kgf	0.65 Kgf	0.60 Kgf	0.55 Kgf
13 Pin	7.5 Kgf	7.3 Kgf	7.1 Kgf	0.68 Kgf	0.63 Kgf	0.58 Kgf
14 Pin	8.0 Kgf	7.8 Kgf	7.6 Kgf	0.71 Kgf	0.66 Kgf	0.61 Kgf
15 Pin	8.5 Kgf	8.3 Kgf	8.1 Kgf	0.74 Kgf	0.69 Kgf	0.64 Kgf

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9. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
9.1	Temperature rise	Then carried the rated current	30°C max.
9.2	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. Contact Resistance: 40 mΩ Max.
9.3	Solder ability	**Tin-Lead Process:** Soldering time: 5 ± 0.5 second Soldering pot: 230 ± 5°C **Lead-Free Process:** Soldering time: 3 ± 0.5 second Soldering pot: 245 ± 5°C	Minimum: 90% of immersed area
9.4	Resistance to soldering heat	**Tin-Lead Process:** Refer Reflow temperature profile(11.1) Soldering time: 10 second Max. Soldering pot: 230 ± 5 °C **Lead-Free Process:** Soldering time: 20 second Max. Soldering pot: 250~260°C Refer Reflow temperature profile(11.2)	No damage
9.5	Heat aging	85 ± 2°C , 96 hours	No damage
9.6	Humidity	60 ± 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 7-3
9.7	Temperature cycling	One cycle consists of : (1)-55 $^{+0}_{-3}$ °C , 30 min. (2)Room temp. 10-15 min. (3) 105$^{+3}_{-0}$ °C , 30 min. (4)Room temp. 10-15 min.	Appearance: No damage Contact resistance: Less than twice of initial

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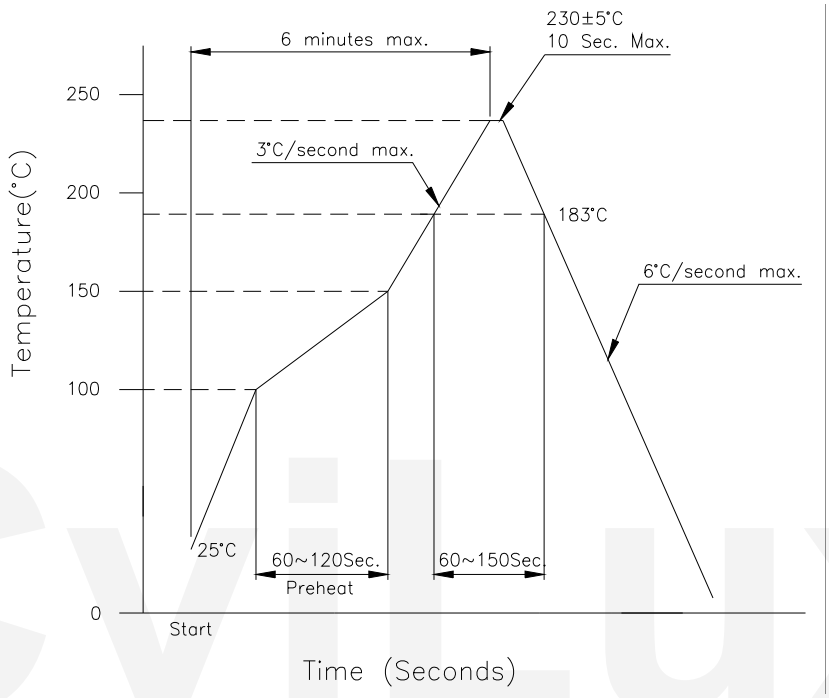
	ITEM	TEST CONDITION	REQUIREMENT
9.8	Salt spray	Temperature: 35 ± 3°C Solution: 5 ± 1% Spray time: 48 ± 4 hours (Stamping before plated) Spray time: 24 ± 4 hours (Stamping after plated) Mate connectors and expose to the following salt mist conditions. Upon completion of the exposure period, salt deposits 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. AMBIENT TEMPERATURE RANGE: -25 to + 85°C

11. Recommended IR Reflow Temperature Profile:

11.1 Using Typical Solder Paste



11.2 Using Lead-Free Solder Paste