

ENGINEERING	PRODUCT SPECIFICATION	SPEC.NO.: SPCI093C
DEPT.	For CI43 Series Connector System	PAGE: 1/5

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
MIL - STD - 1344	Test methods for electrical connectors
EIA- 364	Electronics industries association

3. APPLICABLE SERIES NO: CI43 SERIES

4. SHAPE, CONSTRUCTION AND DIMENSIONS

See attached drawings

5. MATERIALS

See attached drawings

6. ACCOMMODATED P.C.BOARD

6.1 Thickness: 1.6mm(.063")

6.2 P.C. Board Layout: See attached drawings



REVIEWED: David APPROVED: Eisley VERIFIED: Hank

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7. ELECTRICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
7.1	Rated current and voltage		1A 200V AC (r.m.s.) (AWG#28, AWG#30) 0.8A 200V AC (r.m.s.) (AWG#32)
7.2	Contact resistance	Dry circuit of DC 20 mV max. , 100 mA max.(EIA-364-23)	Less than 55mΩ(Initial), 20mΩ Max. change allowed
7.3	Dielectric strength	When applied AC 300 V 1 minute between adjacent terminal(EIA-364-20)	No discharge, flashover or breakdown Current leakage: 1mA Max.
7.4	Insulation resistance	When applied DC 500 V between adjacent terminal or ground (EIA-364-21)	More than 100 MΩ

8. MECHANICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Mating & Un-mating force	Solder the header connector to the test board, then place the board and housing initial and mating & un-mating Operation speed: 25.4±3mm/min Measure the force required to mating & un-mating connector.(EIA-364-13)	See Item 11
8.2	Pin retention force	Push pin from insulator base at speed 25± 3 mm per minute	More than 0.25 Kgf
8.3	Durability	The sample should be mounted on the tester and fully mated and unmated 50 cycles specified at the rate of 25.4±3mm/min.(EIA-364-09)	Contact resistance: To pass Para 7.2

9. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
9.1	Temperature rise	Mate connector: measure the temperature rise at rated current after 1.0A/Power contact. The ambient condition is still air at 25°C (UL 498)	The temperature rise above ambient shall not exceed 30°C

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	ITEM	TEST CONDITION	REQUIREMENT
9.2	Vibration	The electrical load condition shall be 100mA max. for all contacts. 1.5 mm 10-55-10 HZ / minute each 2 hours for X , Y and Z directions (EIA-364-28)	Appearance: No damage Discontinuity: 1 micro second max.
9.3	Solder ability	Subject the test area of contacts into the flux for 5~10Sec. And then into solder bath. Soldering time: 3 ± 0.5 second Soldering temperature: 245 ± 5°C (EIA-364-52)	Minimum: 90% of immersed area
9.4	Resistance to soldering heat	Refer Reflow temperature profile(12.1)	No damage
9.5	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°C 3s	No damage
9.6	Heat aging	85± 2°C , 96 hours(EIA-364-17)	Appearance: No damage Contact resistance: To pass Para 7.2 Dielectric strength: To pass Para 7.3 Insulation resistance: To pass Para 7.4
9.7	Humidity	40 ± 2°C , 90-95% RH , 96 hours measurement must be taken within 30 min. after tested (EIA-364-31)	Appearance: No damage Contact resistance: To pass Para 7.2 Dielectric strength: To pass Para 7.3 Insulation resistance: To pass Para 7.4

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	ITEM	TEST CONDITION	REQUIREMENT
9.8	Temperature cycling	Five cycle consists of :(EIA-364-32) (1)-40 ⁺⁰ °C , 30 min. -3 (2)Room temp. 10-15 min. (3)85 ⁺³ °C , 30 min. -0 (4)Room temp. 10-15 min.	Appearance: No damage Contact resistance: To pass Para 7.2 Dielectric strength: To pass Para 7.3 Insulation resistance: To pass Para 7.4
9.8	Salt spray	Temperature: 35 ± 2°C Solution: 5 ± 1% Spray time: Matte Tin: 24 hours Gold flash: 8 hours Measurement must be taken after water rinse	Appearance: No damage Contact resistance: To pass Para 7.2

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

11.Mating and Un-mating Force:

PIN No.	Mating(kgf max.)	Un-mating(kfg)min.)
2	1.50	0.10
3	1.75	0.15
4	2.00	0.20
5	2.25	0.25
6	2.50	0.30
7	2.75	0.35
8	3.00	0.40
9	3.25	0.45
10	3.50	0.50
11	3.75	0.55
12	4.00	0.60
13	4.25	0.65
14	4.50	0.70
15	4.75	0.75
18	5.50	0.90
20	6.00	1.00
25	7.25	1.25
30	8.50	1.50

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12. Recommended IR Reflow Temperature Profile:

12.1 Using Lead-Free Solder Paste

