

<b>ENGINEERING DEPT.</b>		<b>PRODUCT SPECIFICATION</b>	<b>SPEC.NO.:</b>	<b>SPCI103C</b>
<b>REVISIONS</b>	<b>ECNT114062</b>	<b>For CI19 Series Connector System</b>	<b>PAGE:</b>	<b>1/6</b>

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

3. APPLICABLE SERIES NO: CI19 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 : Eisley .

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**7. ELECTRICAL PERFORMANCE:**

	ITEM	TEST CONDITION	REQUIREMENT
7.1	Rated current and voltage		3A 50V AC (r.m.s.) (AWG#24) 2.0A 50V AC (r.m.s.) (AWG#26) 1.5A 50V AC (r.m.s.) (AWG#28~ AWG#30)
7.2	Contact resistance	Dry circuit of DC 20 mV max. , 10 mA max.(EIA-364-23)	Less than 20 mΩ
7.3	Dielectric strength	When applied AC 500 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 500 MΩ

**8. MECHANICAL PERFORMANCE:**

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Wire size	Specified wire size	Accepts AWG#24~#30
8.2	Terminal crimp Tensile strength	When crimped AWG#24 size wire When crimped AWG#26 size wire When crimped AWG#28 size wire When crimped AWG#30 size wire	More than 3.0 Kgf More than 2.0 Kgf More than 1.0 Kgf More than 0.8 Kgf
8.3	Terminal insertion force	Insertion speed 25± 3 mm per minute into housing	Less than 1.0 Kgf
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 male pin at speed 25± 3 mm per minute	0.7 Kgf max.
8.6	Single contact withdrawal force	Measure force to withdrawal using male pin at speed 25± 3 mm per minute	0.06 Kgf min.
8.7	Pin retention force	Push pin from insulator base at speed 25± 3 mm per minute	More than 0.3 Kgf
8.8	Durability	Connector shall be subjected to 30 cycles of insertion and withdrawal	Appearance: No damage Contact resistance: Less than 40 mΩ

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9. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
9.1	Temperature rise	Mate connector: measure the temperature rise at rated current. The ambient condition is still air at 25°C (UL 498)	The temperature rise above ambient shall not exceed 30°C
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°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)-25 <sup>+0</sup> °C , 30 min. -3 (2)Room temp. 10-15 min. (3)85 <sup>+3</sup> °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
9.9	Salt spray	Temperature: 35 ± 2°C Solution: 5 ± 1% Spray time: 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: -25 to + 85°C

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11.Mating and Un-mating Force:

PIN No.	Mating((kgf) max.)	Un-mating((kgf)min.)	30th Un-mating((kgf)min.)
2	2.0	0.20	0.20
3			
4			
5	3.0	0.30	0.30
6			
7			
8	4.0	0.40	0.40
9			
10			
11	5.1	0.51	0.51
12			
13			
14	6.1	0.61	0.61
15			
16			
17	7.1	0.71	0.71
18			
19			
20	8.1	0.81	0.81

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12. Recommended IR Reflow Temperature Profile:

12.1 Using Lead-Free Solder Paste

