

<b>ENGINEERING DEPT.</b>		<b>PRODUCT SPECIFICATION</b> <b>For CI15 Series Connector System</b>	<b>SPEC.NO.: SPCI033F</b>
<b>REVISIONS</b>	<b>ECNT120150</b>		<b>PAGE: 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
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: CI15 Series

4. SHAPE, CONSTRUCTION AND DIMENSIONS

See attached drawings

5. MATERIALS

See attached drawings

6. ACCOMMODATED P.C.BOARD

6.1 Thickness: 0.6 mm (.024") ~ 1.2 mm (.047"),1.6mm(.063")

6.2 P.C. Board Layout: See attached drawings

REVIEWED : Eisley APPROVED : Sun VERIFIED : Michelle .

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**7. ELECTRICAL PERFORMANCE:**

	ITEM	TEST CONDITION	REQUIREMENT
7.1	Rated current and voltage		1.0A AC/DC(AWG#26) 50V AC/DC (r.m.s.)
7.2	Contact resistance	Dry circuit of DC 20 mV max. , 100 mA max.	Less than 20 mΩ(Initial)
7.3	Dielectric strength	When applied AC 500 V 1 minute between adjacent terminal	No change
7.4	Insulation resistance	When applied DC 500 V between adjacent terminal or ground	More than 500 MΩ

**8. MECHANICAL PERFORMANCE:**

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Wire size	Specified wire size	Accepts AWG#26~#32
8.2	Terminal crimp Tensile strength	When crimped AWG#26 size wire When crimped AWG#28 size wire When crimped AWG#30 size wire When crimped AWG#32 size wire	More than 2.0 Kgf More than 1.3 Kgf More than 0.8 Kgf More than 0.6 Kgf
8.3	Single contact insertion force	Measure force to insertion using 0.50 mm square pin at speed 25± 3 mm per minute	700 gram max.
8.4	Single contact withdrawal force	Measure force to withdrawal using 0.50 mm square pin at speed 25± 3 mm per minute	100 gram min.
8.5	Terminal insertion force	Insertion speed 25± 3 mm per minute into housing	Less than 500 gram
8.6	Contact retaining force in insulator	Retention speed 25± 3 mm per minute from housing	More than 0.7 Kgf
8.7	Durability	Connector shall be subjected to 100 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	More than 1.0 Kgf

**9. ENVIRONMENTAL PERFORMANCE:**

	ITEM	TEST CONDITION	REQUIREMENT
9.1	Temperature rise	Then carried the rated current	30° C max.

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9. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
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.
9.3	Heat aging	85 ± 2 °C , 96 hours	No damage
9.4	Humidity	40 ± 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
9.5	Temperature cycling	One cycle consists of : (1) -55 <sup>+0</sup> / <sub>-3</sub> °C , 30 min. (2) Room temp. 10-15 min. (3) 85 <sup>+3</sup> / <sub>-0</sub> °C , 30 min. (4) Room temp. 10-15 min.	Appearance: No damage Contact resistance: Less than twice of initial
9.6	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

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	ITEM	TEST CONDITION	REQUIREMENT
9.7	Resistance to soldering heat	<p><b>Tin-Lead Process:</b> Soldering time: <math>5 \pm 0.5</math> second Soldering pot: <math>240 \pm 5^{\circ}\text{C}</math></p> <p><b>Lead-Free Process</b> Soldering time: <math>5 \pm 0.5</math> second Soldering pot: <math>260 \pm 5^{\circ}\text{C}</math></p> <p><b>SMT Type Tin-Lead Process:</b> Refer Reflow temperature profile(12.1)</p> <p><b>SMT Type Lead-Free Process:</b> Soldering time: 20 second Max. Soldering pot: <math>250\sim 260^{\circ}\text{C}</math> Refer Reflow temperature profile(12.2)</p>	No damage
9.8	Solder ability	<p><b>Tin-Lead Process:</b> Soldering time: <math>5 \pm 0.5</math> second Soldering pot: <math>230 \pm 5^{\circ}\text{C}</math></p> <p><b>Lead-Free Process:</b> Soldering time: <math>3 \pm 0.5</math> second Soldering pot: <math>245 \pm 5^{\circ}\text{C}</math></p>	Minimum: 90% of immersed area

10. AMBIENT TEMPERATURE RANGE:  $-25$  to  $+85^{\circ}\text{C}$

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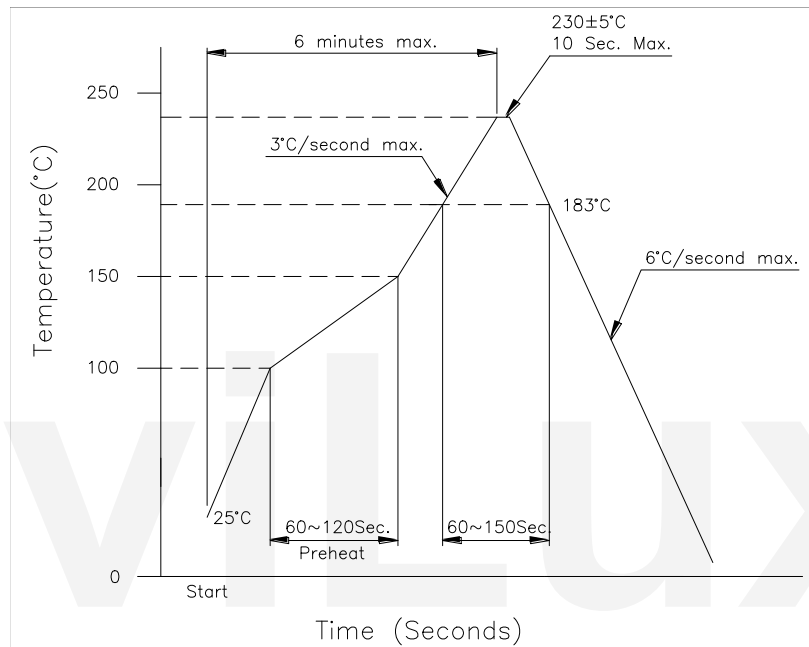
11.Mating and Un-mating Force:

PIN No.	Mating(kgf max.)	Un-mating(kgf min.)
2	2.5	0.5
3	3.0	0.6
4	3.5	0.7
5	4.0	0.8
6	4.5	0.9
7	5.0	1.0
8	5.5	1.1
9	6.0	1.2
10	6.5	1.3
11	7.0	1.4
12	7.5	1.5
13	8.0	1.6
14	8.5	1.7
15	9.0	1.8

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12. Recommended IR Reflow Temperature Profile:

12.1 Using Typical Solder Paste



12.2 Using Lead-Free Solder Paste

