

ENGINEERING DEPT.		PRODUCT SPECIFICATION	SPEC.NO.:	SPCI136D
REVISIONS	ECNT120150	For CI40 Series Connector System	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
SS-00254	Test methods for electronic components ,LEAD-FREE soldering Part design standards

3. APPLICABLE SERIES NO: CI40 Series

4. SHAPE, CONSTRUCTION AND DIMENSIONS

See attached drawings

5. MATERIALS

See attached drawings

6. ACCOMMODATED P.C.BOARD

6.1 Thickness: 1.6 mm (.063")

6.2 P.C. Board Layout: See attached drawings



REVIEWED : Eisley APPROVED : Sun VERIFIED : Jessie .

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#### 7. ELECTRICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
7.1	Rated current and voltage		1.0A (AWG#28) 150V AC/DC (r.m.s.)
7.2	Contact resistance	Dry circuit of DC 20 mV max. , 10 mA.	30 mΩ MAX
7.3	Dielectric strength	When applied AC 1300 V 1 minute between adjacent terminal or ground	No change
7.4	Insulation resistance	When applied DC 500 V between adjacent terminal or ground	100 MΩ MIN

#### 8. MECHANICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Wire size	Specified wire size	Accepts AWG#28~#30
8.2	Terminal crimp Tensile strength	When crimped AWG#28 size wire When crimped AWG#30 size wire	1.0 Kgf (10N) 0.5 Kgf (5N)
8.3	Durability	Connector shall be subjected to 20 cycles of insertion and withdrawal	Contact resistance: 60 mΩ MAX
8.4	Pin retention force	Push pin from insulator base at speed 25± 3 mm per minute	0.4 Kgf (4N) MIN
8.5	Terminal retaining force in insulator	Retention speed 25± 3 mm per minute from Wire to Wire Housing	0.7 Kgf (7N) MIN

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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: 60 mΩ MAX
9.3	Solder ability	Lead-Free Process: Soldering time: 2 ± 0.5 second Soldering pot: 245 ± 5°C	Minimum: 95% of immersed area
9.4	Resistance to soldering heat	Lead-Free Process for SMT Type: Refer Reflow temperature profile(12.1)	No damage
9.5	Heat aging	85 ± 2°C , 96 hours	No damage Contact resistance: 60 mΩ MAX
9.6	Cold aging	-40 ± 2°C , 96 hours	No damage Contact resistance: 60 mΩ MAX
9.7	Humidity	40 ± 2°C , 90-95% RH , 96 hours measurement must be taken within 30 min. after tested	Appearance: No damage Contact resistance: 60 mΩ MAX Dielectric strength: No change Insulation resistance: 30 MΩ MIN
9.8	Temperature cycling	Five cycle consists of : (1)-25 ± 3 °C , 30 min. (2)Room temp. 10-15 min. (3) 85 ± 2 °C , 30 min. (4)Room temp. 10-15 min.	Appearance: No damage Contact resistance: 60 mΩ MAX

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	ITEM	TEST CONDITION	REQUIREMENT
9.9	Salt spray	<p>Temperature: <math>35 \pm 3^{\circ}\text{C}</math>  Solution: <math>5 \pm 1\%</math>  Spray time: <math>48 \pm 4</math> hours  (Stamping before plated)  Spray time: <math>24 \pm 4</math> 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)</p>	<p>Appearance: No damage  Contact resistance:  Less than twice of initial</p>

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

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11.Mating and Unmating Force:

PIN No.	Mating(kgf max.)		Unmating(kgf min.)	
	1st	10th	1st	10th
2	1.23	1.14	0.25	0.20
3	1.46	1.33	0.34	0.29
4	1.70	1.52	0.49	0.39
5	1.83	1.72	0.60	0.44
6	2.07	1.92	0.70	0.60
7	2.29	2.08	0.79	0.65
8	2.51	2.22	0.89	0.70
9	2.74	2.32	0.99	0.75
10	2.97	2.46	1.10	0.80
11	3.22	2.62	1.20	0.85
12	3.45	2.84	1.29	0.89
13	3.68	3.06	1.39	0.94
14	3.91	3.41	1.49	0.99
15	4.12	3.58	1.60	1.05

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12. Recommended IR Reflow Temperature Profile:

12.1 Using Lead-Free Solder Paste

