

ENGINEERING DEPT.	PRODUCT SPECIFICATION For CI16 Series Connector System	SPEC.NO.: SPCI117A PAGE: 1/5
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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: CI16 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 : David APPROVED : Eisley VERIFIED : Hank .

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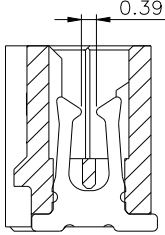
7. ELECTRICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
7.1	Rated current and voltage		1.0A AC (r.m.s.)/DC (AWG#28) 125V AC (r.m.s.)/DC
7.2	Contact resistance	Dry circuit of DC 20 mV max. , 100 mA max.(JIS C5402 5.4)	Less than 20 mΩ
7.3	Dielectric strength	When applied AC 500 V 1 minute between adjacent terminal(JIS C5402 5.2/MIL-STD 202 method 302 Cond. B)	No change
7.4	Insulation resistance	When applied DC 500 V between adjacent terminal or ground (JIS C5402 5.2/MIL-STD 202 method 301)	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 in insulator	Insertion speed 25± 3 mm per minute into housing	Less than 0.60 Kgf
8.4	Terminal retaining force in insulator	Retention speed 25± 3 mm per minute from housing	More than 0.60 Kgf
8.5	Pin retention force	Push pin from insulator base at speed 25± 3 mm per minute	More than 0.30 Kgf
8.6	Mating & Un-mating force	Insert and withdraw connector at speed of 25 ± 3 mm per minute	See Item 11
8.7	Locking force	While withdrawing plug & receptacle without terminal at speed 25±3 mm per minute	2P More than 1.5 Kgf 3P~6P: More than 2 Kgf 7P~20P: More than 3 Kgf

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	ITEM	TEST CONDITION	REQUIREMENT
8.8	Durability	Connector shall be subjected to 30 cycles of insertion and withdrawal (repeatedly by the rate of 10 cycles per minute)	Contact resistance: Less than twice of initial
8.9	Diagonal pulling test	<p>The product should match three requirements after 5 cycles of insertion and withdrawal (mating and un-mating) test.</p> <p>We will withdrawal the housing by pulling the wire toward four directions to left, right, up and down at maximum angel of 60° for 5 times.</p> 	<p>Contact resistance: Less than 1.5 times of the initial value.</p> <p>Temperature rise: 30°C max.</p> <p>The dimension of the open window of plug contact on wafer side should be less than 0.39mm.</p>

9. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
9.1	Temperature rise	Then carried the rated current (UL 498)	30°C max.
9.2	Vibration	1.5 mm 10-55-10 HZ / minute each 2 hours for X , Y and Z directions (MIL-STD-202,method 201A)	Appearance: No damage Discontinuity: 1 micro second max.
9.3	Solder ability	Lead-Free Process for SMT Type: Soldering time: 3 ± 0.5 second Soldering pot: 245 ± 5°C	Minimum: 90% of immersed area
9.4	Resistance to soldering heat	Refer Reflow temperature profile	No damage
9.5	Heat aging	85 ± 2°C , 96 hours(JIS C0021/MIL-STD-202,method 108A,condition A)	No damage Contact resistance: Less than twice of initial
9.6	Humidity	60 ± 2°C , 90-95% RH , 96 hours measurement must be taken within 30 min. after tested (JIS C0020/MIL-STD-202, method 103 B, condition B)	Appearance: No damage Contact resistance: Less than twice of initial Insulation resistance: To pass Para 7-4

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	ITEM	TEST CONDITION	REQUIREMENT
9.7	Temperature cycling	Five cycle consists of :(JIS C0025) (1)-55 ⁺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: Less than twice of initial
9.8	Salt spray	Temperature: 35 ± 2°C Solution: 5 ± 1% Spray time: 48 ± 4 hours Measurement must be taken after water rinse(JIS C5028/MIL-STD-202, method 101 D, condition B)	Appearance: No damage Contact resistance: Less than twice of initial

10. AMBIENT TEMPERATURE RANGE: -25 to + 85°C

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11. Mating and Un-mating Force(Remove Latch):

PIN No.	At Initial		At 30th
	Mating(kgf max.)	Un-mating(kgf min.)	Un-mating(kgf min.)
2	2.00	0.20	0.20
3	2.00	0.20	0.20
4	2.00	0.20	0.20
5	3.00	0.30	0.30
6	3.00	0.30	0.30
7	3.00	0.30	0.30
8	4.00	0.40	0.40
9	4.00	0.40	0.40
10	4.00	0.40	0.40
11	5.00	0.50	0.50
12	5.00	0.50	0.50
13	5.00	0.50	0.50
14	6.00	0.60	0.60
15	6.00	0.60	0.60
16	6.00	0.60	0.60
17	7.00	0.70	0.70
18	7.00	0.70	0.70
19	7.00	0.70	0.70
20	8.00	0.80	0.80

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12. Recommended IR Reflow Temperature Profile:
 12.1 Using Lead-Free Solder Paste

