

<b>ENGINEERING</b>  <b>DEPT.</b>	<b>PRODUCT SPECIFICATION</b> <b>For 7.5- 5.00mm Pitch</b> <b>Wire to Board Connector of System CI</b>	<b>SPEC.NO.: SPCI040A</b>  <b>PAGE: 1/4</b>
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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.: CI76 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 : Alex    APPROVED : David    VERIFIED : Sun .

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**7. ELECTRICAL PERFORMANCE:**

	ITEM	TEST CONDITION	REQUIREMENT
7.1	Rated current and voltage		7A 250V AC (r.m.s.)
7.2	Contact resistance	Dry circuit of DC 20 mV max. , 100 mA max.	Less than 20 mΩ
7.3	Dielectric strength	When applied AC 1500 V 1 minute between adjacent terminal	No change
7.4	Insulation resistance	When applied DC 500 V between adjacent terminal or ground	More than 1000 MΩ

**8. MECHANICAL PERFORMANCE:**

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Wire size	Specified wire size	Accepts AWG#16~#22
8.2	Terminal crimp Tensile strength	When crimped AWG#16 size wire When crimped AWG#18 size wire When crimped AWG#20 size wire When crimped AWG#22 size wire	More than 11.0 Kgf More than 9.0 Kgf More than 7.0 Kgf More than 5.0 Kgf
8.3	Terminal insertion force	Insertion speed 25± 3 mm per minute into housing	Less than 1.5 Kgf
8.4	Contact retaining force in insulator	Retention speed 25± 3 mm per minute from housing	More than 3.0 Kgf
8.5	Single contact insertion force	Measure force to insertion using 1.14 mm square pin at speed 25± 3 mm per minute	1.2 Kgf max.
8.6	Single contact withdrawal force	Measure force to withdrawal using 1.14 mm square pin at speed 25± 3 mm per minute	300 gram min.
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 2.5 Kgf

**8.9 Insertion Force and Withdrawal Force :**
**8.9.1 Test method:**

Housing with crimped contacts and a header shall be mated and unmated on the same axis. Initial insertion and withdrawal forces and withdrawal force at 30<sup>th</sup> shall be measured for single circuit and multi-circuits. For the measurement of single circuit, the housing lock shall be removed.

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**8.9.2 Requirements:**

Unit: Kgf

NO. OF CIRCUITS	INSERTION FORCE (Max.)	WITHDRAWAL FORCE (Min.)
2	2.5	0.3
3	3.0	0.4
4	3.5	0.5
5	4.0	0.6
6	5.0	0.7
7	6.0	0.8
8	7.0	0.9
9	8.0	1.2
10	9.0	1.5
11	10.0	1.8
12	11.5	2.0

**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.
9.3	Solder ability	Soldering time: 5 ± 0.5 second Soldering pot: 230 ± 5°C	Minimum: 90% of immersed area
9.4	Resistance to soldering heat	Soldering time: 5 ± 0.5 second Soldering pot: 260 ± 5°C	No damage
9.5	Heat aging	85 ± 2°C , 96 hours	No damage
9.6	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
9.7	Temperature cycling	One cycle consists of : (1)-55 <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: Less than twice of initial

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	ITEM	TEST CONDITION	REQUIREMENT
9.8	Salt spray	Temperature: $35 \pm 3^{\circ}\text{C}$ Solution: $5 \pm 1\%$ Spray time: $48 \pm 4$ hours Measurement must be taken after water rinse	Appearance: No damage Contact resistance: Less than twice of initial

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