

<b>ENGINEERING DEPT.</b>		<b>PRODUCT SPECIFICATION</b> <b>For 0.60mm Pitch</b> <b>Wire to Board Connector of CI20 System</b>	<b>SPEC.NO.: SPCI106B</b>
<b>REVISIONS</b>	<b>ECNT120150</b>		<b>PAGE: 1/5</b>

**1. SCOPE:**

This specification covers the performance, test and quality requirements for the 0.6mm pitch wire to board connector series

**2. APPLICABLE STANDARDS:**

EIA - 364	Test methods for electrical connectors
MIL - STD - 202	Methods for test of connectors for electronic equipment

**3. APPLICABLE SERIES NO: CI20 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:**

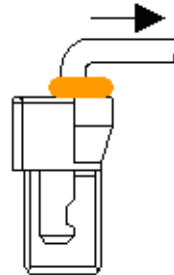
	ITEM	TEST CONDITION	REQUIREMENT
7.1	Rated current and voltage		Rated current: AWG#36:0.2A AC/DC AWD#34:0.3A AC/DC Rated voltage: 30V AC/DC
7.2	Contact resistance	EIA 364 – 23B Dry circuit of DC 20 mV Max. , 1mA Max. Wire length :30 mm	40mΩ Max.(initial) 50mΩ Max.(after environmental)
7.3	Dielectric strength	EIA 364 – 20B 200 V AC 1 minute. Test between adjacent circuits and contact.	No breakdown Current leakage: 2mA Max.
7.4	Insulation resistance	EIA 364 – 21C 250V DC for 1 minute. Test between adjacent circuits and contact.	100MΩ Min.

**8. MECHANICAL PERFORMANCE:**

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Wire size	Specified wire size	Accepts AWG#34~#36
8.2	Wire Retention Force	Pulling load shall be applied between a correctly terminated contact and wire at the constant speed of 25mm per minute. The load to pull the contact out of the wafer shall be measures. (1~5mm/sec.)	Parallel direction: AWG#36: 0.25kgf min. AWG#34: 0.20kgf min. Perpendicular direction: AWG#36 : 0.10kgf AWG#34 : 0.05kgf min.



Parallel direction



Perpendicular direction

Note: If need retention force more, you must use the UV glue.

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	ITEM	TEST CONDITION	REQUIREMENT
8.4	Contact Retention Force	A base contact shall be mounted in a wafer and pulled in alignment at a constant speed of 25 mm per minute. The Load to pull the contact out of the wafer shall be measured.	0.12kgf Min.
8.5	Durability	EIA 364 – 09C Mate and unmate samples for 30 cycles at a speed of 10times/min.	Contact Resistance: 50mΩ Max
8.3	Insertion And Removal Force	EIA 364 – 13 Retention speed 25± 3 mm per minute from housing	See the table

**Requirements**

Number of circuit	At initial		At 30th
	I.F.( Max.) kgf	R.F.( Min.) kgf	R.F.( Min.) kgf
4	2.0	0.10	0.05
5	2.0	0.10	0.05
6	2.0	0.15	0.10
8	2.5	0.20	0.15
10	3.0	0.20	0.15
12	3.0	0.22	0.17

**9. ENVIRONMENTAL PERFORMANCE:**

	ITEM	TEST CONDITION	REQUIREMENT
9.1	Temperature rise	Then carried the rated current (UL 498)	Δ 30° C max.
9.2	Vibration	MIL-STD-202,Method 201,Condition A 1.52 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: 50mΩ Max

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	ITEM	TEST CONDITION	REQUIREMENT
9.3	Physical Shock	MIL-STD-202,method 213B,Condition A Accelerated Velocity: 490 m/s <sup>2</sup> (50 G) Waveform: Half sine Duration: 11 m sec. Number of Drops: 3 drops each to normal and reversed directions of X, Y and Z axes, totally 18 drops.	Appearance: No damage Discontinuity: 1 micro second Max. Contact Resistance: 50mΩ Max
9.4	Thermal shock	MIL-STD-202G, EIA 364-32C,Condition I Subject mated samples to 25 cycles between -55°C and 85°C	Appearance: No damage Contact Resistance: 50mΩ Max
9.5	Cold resistance	JIS C0020 Mated connect -40 ± 2°C , 96 hours After test, recondition under standard atmospheric condition for 2 hours.	No damage Contact Resistance: 50mΩ Max Insulation Resistance: 100MΩ Min
9.6	Humidity	MIL-STD-202 Method 103B, Condition B Mated connectors shall be subjected to the following condition. Temperature: 40°C Relative humidity: 90~95% Duration: 96 hours	Contact Resistance: 50mΩ Max Insulation Resistance: 100MΩ Min
9.7	Temperature Life	EIA 364-17B,Condition A Subject mated samples to temperature life at 85°C for 96 hours.	Contact Resistance: 50mΩ Max

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	ITEM	TEST CONDITION	REQUIREMENT
9.8	Salt spray	<p>Temperature: <math>35 \pm 3^{\circ}\text{C}</math></p> <p>Solution: <math>5 \pm 1\%</math></p> <p>Spray time: <math>48 \pm 4</math> hours (Stamping before plated)</p> <p>Spray time: <math>24 \pm 4</math> hours (Stamping after plated)</p> <p>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.</p> <p>The specimens shall be suspended from the top using waxed twine, string or nylon thread.</p> <p>The test only define the plating area, without plating area (as copper cross section) will not be defined.</p> <p>(EIA 364-26B / MIL-STD-202 Method 101)</p>	<p>No evident corrosion</p> <p>Contact Resistance: 50mΩ Max</p> <p>Insulation Resistance: 100MΩ Min</p>

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