

<b>ENGINEERING DEPT.</b>		<b>PRODUCT SPECIFICATION</b>	<b>SPEC.NO.: SPCI163B</b>
<b>REVISIONS</b>	<b>ECNT121010</b>	<b>CI07 SMT H Type Series Connector System</b>	<b>PAGE: 1/4</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.: Header: CI0702M1HRA-NH (Halogen-Free)  
Housing: SFKR-02V-S  
Terminal: SSFH-001T-P0.5

4. SHAPE, CONSTRUCTION AND DIMENSIONS

See attached drawings

5. MATERIALS

See attached drawings

6. ACCOMMODATED P.C.BOARD

6.1 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		3.2A (AWG #26) , 350V AC/DC
7.2	Contact resistance	Dry circuit of DC 20mV max. , 100mA max., Wire resistance shall be removed from the measured value.	Less than 10 mΩ(Initial) Less than 20 mΩ(After)
7.3	Dielectric strength	When applied AC 1700 V 1 minute between adjacent terminal	No Breakdown
7.4	Insulation resistance	When applied DC 500 V between adjacent terminal or ground	More than 1000 MΩ (Initial) More than 500 MΩ (After)

**8. MECHANICAL PERFORMANCE:**

	ITEM	TEST CONDITION	REQUIREMENT		
8.1	Wire size	Specified wire size	Accepts AWG#22-#30		
8.2	Terminal crimp Tensile strength	When crimped AWG#22 size wire	More than 5.10 kgf		
		When crimped AWG#24 size wire	More than 3.06 kgf		
		When crimped AWG#26 size wire	More than 2.04 kgf		
		When crimped AWG#28 size wire	More than 1.02 kgf		
		When crimped AWG#30 size wire	More than 0.51 kgf		
8.3	Terminal retaining force in insulator	Retention speed 25± 3 mm per minute from Housing	More than 1.02 kgf		
8.4	Pin retention force in Board mount Header	Push Pin from insulator base at speed 25± 3 mm per minute	More than 0.4 kgf		
8.5	Mating and Unmating force(Remove Locking Ramp)	Speed 25± 3 mm per minute	Mating (Max.)	Unmating (Min.)	Unmating (Min.) 30th
			2.0 kgf	0.5 kgf	0.2 kgf
8.6	Locking force	While with drawing plug&receptacle without terminal at speed 25± 3 mm per minute	More than 1.2 Kgf		
8.7	Durability	Connector shall be subjected to 30 cycles of insertion and withdrawal	Contact resistance: To Pass 7.2		

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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: To Pass 7.2
9.3	Shock	490m/S <sup>2</sup> (50G) , 3 strokes in each X.Y.Z. axes.	Appearance: No damage Discontinuity: 1 micro second max.
9.4	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: To Pass 7.2
9.5	Humidity	40± 2° C, 90-95% RH, 240 hours measurement must be taken within 30 min. after tested	Appearance: No damage Contact resistance: To Pass 7.2 Dielectric strength: To pass 7.3 Insulation resistance: To Pass 7.4
9.6	Heat aging	85 ± 2° C , 250 hours	Appearance: No damage Contact resistance: To Pass 7.2

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	ITEM	TEST CONDITION	REQUIREMENT
9.7	Temperature cycling	One cycle consists of : (1) $-55 \pm 3^{\circ}\text{C}$ , 30 min. (2) Room temp. 10-15 min. (3) $85 \pm 3^{\circ}\text{C}$ , 30 min. (4) Room temp. 10-15 min. Total cycle: 25 cycle	Appearance: No damage Contact resistance: To Pass 7.2 Dielectric strength: To Pass 7.3 Insulation resistance: To Pass 7.4
9.8	Solder ability	Soldering time: $3 \pm 0.5$ second Soldering pot: $245 \pm 5^{\circ}\text{C}$	Minimum: 95% of immersed area
9.9	Resistance to soldering heat	Refer Reflow temperature profile(11.1)	No damage

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

11. Recommended IR Reflow Temperature Profile:

11.1 Using Lead-Free Solder Paste

