

<b>ENGINEERING</b>  <b>DEPT.</b>	<b>PRODUCT SPECIFICATION</b>  <b>For CI31 Series Connector System</b>	<b>SPEC.NO.: SPCI009H</b>  <b>PAGE: 1/3</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
SS-00254	Test methods for electronic components ,LEAD-FREE soldering Part design standards

3. APPLICABLE SERIES NO.: CI31 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 :  Eisley  VERIFIED :  Hank  .

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**7. ELECTRICAL PERFORMANCE:**

	ITEM	TEST CONDITION	REQUIREMENT
7.1	Rated current and voltage		3A 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 1000 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#22~#28
8.2	Terminal crimp Tensile strength	When crimped AWG#22 size wire When crimped AWG#24 size wire When crimped AWG#26 size wire When crimped AWG#28 size wire	More than 5.0 Kgf More than 3.0 Kgf More than 2.0 Kgf More than 1.3 Kgf
8.3	Terminal insertion force	Insertion speed 25± 3 mm per minute into housing	Less than 1.0 Kgf
8.4	Contact retaining force in insulator	Retention speed 25± 3 mm per minute from housing	More than 2.0 Kgf
8.5	Single contact insertion force	Measure force to insertion using 0.64 mm square pin at speed 25± 3 mm per minute	600 gram max.
8.6	Single contact withdrawal force	Measure force to withdrawal using 0.64 mm square pin at speed 25± 3 mm per minute	60 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 1.5 Kgf

**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.

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	ITEM	TEST CONDITION	REQUIREMENT
9.3	Solder ability	<b>Tin-Lead Process:</b> Soldering time: $5 \pm 0.5$ second Soldering pot: $230 \pm 5^{\circ}\text{C}$ <b>Lead-Free Process:</b> Soldering time: $3 \pm 0.5$ second Soldering pot: $245 \pm 5^{\circ}\text{C}$	Minimum: 90% of immersed area
9.4	Resistance to soldering heat	<b>Tin-Lead Process:</b> Soldering time: $5 \pm 0.5$ second Soldering pot: $240 \pm 5^{\circ}\text{C}$ <b>Lead-Free Process</b> Soldering time: $5 \pm 0.5$ second Soldering pot: $260 \pm 5^{\circ}\text{C}$	No damage
9.5	Heat aging	$85 \pm 2^{\circ}\text{C}$ , 96 hours	No damage
9.6	Humidity	$40 \pm 2^{\circ}\text{C}$ , 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)- $55 \begin{smallmatrix} +0 \\ -3 \end{smallmatrix}^{\circ}\text{C}$ , 30 min. (2)Room temp. 10-15 min. (3) $85 \begin{smallmatrix} +3 \\ -0 \end{smallmatrix}^{\circ}\text{C}$ , 30 min. (4)Room temp. 10-15 min.	Appearance: No damage Contact resistance: Less than twice of initial
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:  $-40$  to  $+85^{\circ}\text{C}$