



ENGINEERING DEPT.		PRODUCT SPECIFICATION HDMI Board Mount Connector (CU11)	SPEC.NO.: SPCU028B
REVISIONS	ECNT120150		PAGE: 1/5

1. SCOPE:

This specification covers performance, tests and quality requirements for the HDMI connector.

2. APPLICABLE STANDARDS:

MIL - STD - 202	Test methods for electrical component parts
EIA-364	Test methods for electrical connectors
EIA - RS - 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.: **CU11SAM10E0-R0**

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 : Eisley APPROVED : Sun VERIFIED : Jessie .

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**7. ELECTRICAL PERFORMANCE:**

	ITEM	TEST CONDITION	REQUIREMENT
7.1	Rated current and voltage		0.5A 40V AC (r.m.s.)
7.2	Contact resistance	Mate connectors Contact: Measure by dry circuit, 20mV max, 10mA. Shell: Measure by open circuit, 5V max, .100mA (EIA-RS-364-23B)	Contact: 30 mΩ Max. (before & after)  Shell: 50 mΩ Max. (before & after)
7.3	Dielectric strength	Mated connectors: Apply 300V AC(r.m.s) for 1 minute between adjacent terminal or ground Unmated connectors: Apply 500V AC(r.m.s) for 1 minute between adjacent terminal or ground (EIA-RS-364-20C)	No Breakdown
7.4	Insulation resistance	Unmated connectors: Apply 500V DC between adjacent terminal or ground Mated connectors: Apply 150V DC between adjacent terminal or ground (EIA-RS-364-21C)	Unmated: 100 MΩ min.  Mated: 10 MΩ min.

**8. MECHANICAL PERFORMANCE:**

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Durability	Measure contact and shell resistance after following. Automatic cycling: Type A:10,000 cycles at 100±50 cycles per hour (EIA-RS-364-09A)	Appearance: No damage Contact resistance: Contact: 30 mΩ Max. (before & after) Shell: 50 mΩ Max. (before & after)
8.2	Insertion / Withdrawal Forces	The force shall be measured with the plug at rate of 25mm/minute. This test shall be made in a direction along the axis of both the socket and the plug. After 4 times, mating force and unmating force shall be measure. (EIA-RS-364-13A)	Insertion Forces : 4.5 Kgf max. Withdrawal Forces : 1.0 Kgf min.

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	ITEM	TEST CONDITION	REQUIREMENT
8.3	Vibration	Amplitude: 1.52mm P-P or 147m/ s <sup>2</sup> (15G) Sweep time: 50-2000-50Hz in 20 minutes. Duration: 12 times in each X、Y、Z axes. (total of 36 times) Electrical load: DC100 mA current shall be flowed during the test. (EIA-RS-364-28)	Appearance: No damage Contact resistance: Contact: 30 mΩ Max. (before & after) Shell: 50 mΩ Max. (before & after) Discontinuity: 1 μsec maximum.

**9. ENVIRONMENTAL PERFORMANCE:**

	ITEM	TEST CONDITION	REQUIREMENT
9.1	Solder ability	Soldering time: 5 ± 0.5 second Soldering pot: 245 ± 3 °C	Minimum: 95% of immersed area
9.2	Resistance to soldering heat	Soldering time: 10 second. Soldering pot: 250 °C Refer Reflow temperature profile(11.1)	Appearance: No evidence of physical damage
9.3	Humidity	The specimens shall be places in a chamber and Subjected to a relative humidity of 90% to 95% and a temperature of 40±2 °C for 96 hours then placed in ambient temperature for more than 1 hour. (EIA-RS-364-31A)	Appearance: No damage Contact resistance: Contact: 30 mΩ Max. (before & after) Shell: 50 mΩ Max. (before & after)

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ITEM	TEST CONDITION	REQUIREMENT
9.4 Salt Spray	<p>Temperature: <math>35 \pm 3^{\circ}\text{C}</math>            Solution: <math>5 \pm 1\%</math>            Spray time: <math>48 \pm 4</math> hours            (Stamping before plated)            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.            (EIA 364-26B / MIL-STD-202 Method 101)</p>	<p>Appearance: No damage            Contact resistance:            Less than twice of initial</p>
9.5 Temperature life (heat)	<p>The specimens shall be subjected to a temperature of <math>105 \pm 2^{\circ}\text{C}</math> for 250 hours, then placed in ambient temperature for more than 3 hours.            (MIL-STD-1344A, Method 1005.1)</p>	<p>Appearance: No evidence of physical damage            Contact resistance:            Contact: <math>30\text{ m}\Omega</math> Max.            (before &amp; after)            Shell: <math>50\text{ m}\Omega</math> Max.            (before &amp; after)</p>
9.6 Temperature life (cold)	<p>The specimens shall be subjected to a temperature of <math>-25^{\circ}\text{C}</math> for 96 hours, then placed in ambient temperature for more than 3 hours.            (MIL-STD-1344A, Method 1005.1)</p>	<p>Appearance: No evidence of physical damage            Contact resistance:            Contact: <math>30\text{ m}\Omega</math> Max.            (before &amp; after)            Shell: <math>50\text{ m}\Omega</math> Max.            (before &amp; after)</p>

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

