KUNMING
ELECTRONICS CO., LTD. ***SPECIFICATION***

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HDMI TYPE A CONNECTOR	KMHDA001AF19	DATE : 2018.02.14

1. **This specification covers the requirements for HDMI Connector Interface.**
2. **Material of Components:**
   A.Housing: Thermoplastic, UL94V-0 Rated
   B.Contact: Copper Alloy
   C.Shell: Copper Alloy
3. **Design and Construction:**
   Product shall be of the design, construction and physical dimensions specified in the applicable product drawing.
4. **Ratings:**
   A.Temperature: -25 ~ +85°C

5. **Mechanical characteristics:**

Item	Property	Test condition	Performance
5-1	Vibration	Total amplitude: 1.52mm P-P or 147 m/s^2 {15G} Sweep time: 50-2000-50Hz in 20 minutes. Duration: 12 times in each (total of 36 Times) X,Y,Z axes. Electrical load: DC 100mA current shall be Flowed during the test. ANSI/EIA-364-28 Condition III	Appearance: No Damage Contact Resistance: Contact: Change from initial value: 30 mΩ Max. Shell Part: Change from initial value: 50 mΩ Max. Discontinuity: 1 μsec Max.
5-2	Mechanical Shock	Duration of pulse: 11ms; Waveform : half sine,; 490m/s^2{50G},3 strokes in each X.Y.Z axes ANSI/EIA-364-27, Condition A	Appearance: No Damage Contact: Change from; initial value: 30 mΩ Max. Shell Part: Change from initial value: 50 mΩ Max. Discontinuity: 1 μsec Max.

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Item	Property	Test condition	Per ormance
5-3	Durability	Measure contact and shell resistance after Following. Automatic cycling: 10000 cycles at 100±50 cycles per hour	Contact Resistance: Contact: Change from; initial value: 30 mΩ Max. Shell Part: Change from Initial value: 50 mΩ Max.
5-4	Insertion and withdrawal Forces	Insertion and withdrawal speed of 25mm/minute. ANSI/EIA-364-13	Insertion force: 45N MAX. withdrawal force: 10N MIN. 40N MAX.
5-5	Cable Flex	100 cycles in each of 2 planes Dimension X=3.7 x Cable Diameter. ANSI/EIA-364 41C, Condition I	Discontinuity: 1μsec Max. Dielectric Withstanding Voltage and Insulation Resistance: Conform to item of dielectric withstanding voltage and insulation resistance

6. Electrical characteristics:

Item	Property	Test condition	Performance
6-1	C ntact Resistance	Mated connectors. Contact: measure by dry circuit, 20mV MAX.10mA Shell: measure by dry circuit, 5V MAX.100mA ANSI/EIA-364-06B	30mΩ MAX.
6-2	Dielectric Strength	Unmated connectors, apply 500V AC between adiacent terminal or ground. Mated onnect or, apply 300V AC. between adjacent terminal and ground.	No Damage
6-3	Insulation resistance	Unmated connectors, 500V DC isapplied between contact from shell . ANSI/EIA-364-21C	100 MΩ MIN.unmated
		Mated connectors,150V DC isapplied between contact from shell.	10 MΩ MIN.mated

Item	Property	Test condition	Performance
6-4	Contact Current Rating	55℃ MAX. ambient 85℃ MAX. temperature change ANSI/EIA-364-70A	0.5A MIN
6-5	Applied Voltage Rating	40V AC continuous MAX.on any signal pin with respec to the shield.	No Damage
6-6	Electorstatic Discharge	Test unmated each connectors from 1KV to 8KV in 1 KV steps using 8mm ball probe. IEC-801-2	No evidence of Disscharge to Contacts at 8 KV
6-7	T.M.D.S Signal Time Domain impedance	Rise time ≤ 200ps(10%-90%) Signal to Ground pin ratio per HDMI designation. Differential Measurement Specimen Environment Impedance =100Ω differential; Source-side receptacle connector mounted on a controlled impedance PCB fixture. ANSI/EIA-364-108	Connector Area: 100Ω±15% Transition Area: 100Ω±15% Cable Area:100Ω±10%
6-8	T.M.D.S Signal Time Domain Crosstalk:FEXT	Rise time ≤ 200ps(10%-90%) Signal to Ground pin ratio per HDMI designation. Differential Measurement Specimen Environment Impedance =100Ω differential; Source-side receptacle connector mounted on a controlled impedance PCB fixture. Driven pai and victim pair. ANSI/EIA-364-90	Type :5% MAX.

7. **Environment characteristics:**

Item	Property	Test condition	Performance
7-1	Thermal Shock	10 cycles of: a) -55℃ for 30 minutes b) +85℃ for 30 minutes ANSI/EIA-364-32C,Condition I	Appearance:No Damage Contact: Change from; initial value: 30 mΩ Max. Shell Part: Change from initial value:50 mΩ Max.
7-2	Humidity	Mate connectors together and perform the test as follows. Temperature:+25 to +85℃ Relative Humidity :80 to 95% Duration:4 cycles(96 hours) Upon completion of the test, specimens shall be conditioned at ambient room conditions for 24 hours. after which the specified measurements shall be performed ANSI/EIA-364-31B	Appearance:No Damage Contact: Change from; initial value: 30 mΩ Max. Shell Part: Change from initial value:50 mΩ Max.
7-3	Thermal Aging	Mate connectors and expose to +105±2℃ for 250 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed.	Appearance:No Damage Contact: Change from; initial value: 30 mΩ Max. Shell Part: Change from initial value:50 mΩ Max.

8. Appearance:

No scratches,soil,rust or discoloration shall be observed.

9. Compliance with specifications:

The above specification shall be read in conjunction with the applicable drawing and the individual specification,

Whenever this specification conflicts with the applicable drawing or the individual specification ,the latter shall govern.

10. Country of origin:

This jack is made and assemby in china.

11. Amendment:

When the amendment of this specification comes into necessity,it shall be made by the mutual consulation and the agreement between manufacturer and customer.