



| HDMI TYPE A PIN ASSIGNMENT | |
|----------------------------|---------------------------|
| PIN | Signal Assignment |
| 1 | TMDS Data2+ |
| 2 | TMDS Data2 Shield |
| 3 | TMDS Data2- |
| 4 | TMDS Data1+ |
| 5 | TMDS Data1 Shield |
| 6 | TMDS Data1- |
| 7 | TMDS Data0+ |
| 8 | TMDS Data0 Shield |
| 9 | TMDS Data0- |
| 10 | TMDS Clock+ |
| 11 | TMDS Clock Shield |
| 12 | TMDS Clock- |
| 13 | CEC |
| 14 | Reserved (N.C. on device) |
| 15 | SCL |
| 16 | SDA |
| 17 | DDC/CEC Ground |
| 18 | +5V Power |
| 19 | Hot Plug Detect |




快樂電子有限公司
KALER ELECTRONICS CO.,LTD.

| REV. | REVISIONS | | | |
|------|-----------|----------|-----------------|------|
| | ECN NO. | LOCATION | DESCRIPTION | DATE |
| | | | INITIAL RELEASE | |

| | | | | | | | | |
|-------|-----|----------|-------|---------|--|---|-----------|----------------|
| SCALE | N/A | DESIGNER | QIANG | 7/08/11 | UNLESS OTHKRWISE SPECIFIED DIMENSIONS ARE IN mm |  快樂電子有限公司 KALER ELECTRONICS CO.,LTD. | | |
| REV | A | CHECKED | LANG | 7/08/11 | | | | |
| SHEET | 1/1 | APPROVE | CARL | 7/08/11 | DIMRNSION | TOLERANCE | TITLE: | HDMI A TYPE |
| | | | | | . XX | ± 0.20 | PART. NO. | HDAD00-CG0C02B |
| | | | | | . X | ± 0.30 | | |
| | | | | | X . | ± 0.50 | DWG. NO. | |
| | | | | | ANGULAR | ± 5° | | |
| | | | | | UNIT | mm  | | |

SPECIFICATION FOR APPROVAL

規 格 書

| | | | |
|---|-------------|----------|-------------|
|  快樂電子有限公司 KALER ELECTRONICS CO., LTD | 文件編號 | | FD-WI-D-038 |
| | 發行日期 | | 2011-4-25 |
| SPECIFICATION 規格書 | | 版本: A | 頁碼: 1/5 |
| SERIES 產品系列 | HDMI A TYPE | | |
| DRAWN 設計 | LANG | APPD 審 批 | CARL |

1. Scope

1.1 Content

This specification is designated the Performance, Tests and quality requirements High-Definition Multimedia Interface(HDMI) Connector A Type.

1.2 Design and Construction

Product shall be conformed the Design, Construction and Physical dimensions shown as product drawing.

2. Material

2.1 Connector

Shell: Brass.

Housing: LCP UL 94V-0.

Terminal: Phosphor copper.

3. Ratings

3-1. Voltage Rating : 40V AC(RMS)

3-2. Current Rating : 0.5A per contact minimum

3-3. Operating temperature : -25℃ ~ +85℃

4. Mechanical Performance

| No. | Item | Test Condition | Requirement | |
|-----|-----------|--|--------------------|---|
| 4-1 | Vibration | 1mm P-P or 147m/s ² {15G} Sweep time: 50-2000-50Hz in 20 minutes. Duration : 12 times in each (total of 36 Times) X, Y, Z . Electrical load : DC100mA current shall be Flowed during the test. (ANSI/EIA-364-28 Condition III) | Appearance | No Damage |
| | | | Contact Resistance | Contact : Change from initial value: 30 milliohms maximum. Shell Part : Change from initial value: 50 milliohms maximum. |
| | | | Discontinuity | 1 μ sec maximum. |

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| No | Item | Test Condition | | Requirement | |
| 4-2 | Shock | Pulse width: 11 msec., 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 Resistance | Contact : Change from initial value: 30 milliohms maximum. Shell : Change from initial value: 50 milliohms maximum. |
| | | | | Discontinuity | 1 μ sec maximum. |
| 4-3 | Durability | Measure contact and shell resistance after Following. Automatic cycling : 10,000 cycles at 100 ± 50 cycles per hour | | Contact Resistance | Contact : Change from initial value: 30 milliohms maximum. Shell : Change from initial value: 50 milliohms maximum. |
| 4-4 | Insertion Force | Insertion and withdrawal speed : 25mm/minute. (ANSI/EIA-364-13) | | Insertion Force | 44.1N {4.5kgf} maximum |
| 4-5 | Withdrawal Force | Insertion and withdrawal speed : 25mm/minute. (ANSI/EIA-364-13) | | Withdrawal Force | 9.8N minimum 39.2N maximum |

5. Electrical Characteristics

| No | Item | Test Condition | Requirement |
|-----|--------------------|---|---|
| 5-1 | Contact Resistance | Mated connectors, Contact : measure by dry circuit, 20 mVolts maximum., 10mA. Shell : measured by open circuit, 5 Volts maximum , 100mA. (ANSI/EIA-364-06B) | Initial Contact resistance excluding conductor resistance: 10 milliohms maximum . (Target design value) |

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| No | Item | Test Condition | Requirement |
|-----|------------------------|---|--------------------------------|
| 5-2 | Dielectric Strength | Unmated connectors, apply 500 Volts AC(RMS) between adjacent terminal or ground. Mated connector, apply 300 Volts AC(RMS.) between adjacent terminal and ground. (ANSI/EIA-364-20C, Method A) | No Breakdown |
| 5-3 | Insulation Resistance | Unmated connectors, apply 500 Volts DC between adjacent terminal or ground. (ANSI/EIA 364-21C) | 100 megaohms minimum (unmated) |
| | | Mated connectors, apply 150 Volts DC between adjacent terminal or ground. | 10 megaohms minimum (mated) |
| 5-4 | Contact Current Rating | 55 ° C, maximum ambient 85 ° C, maximum temperature change (ANSI/EIA-364-70A) | 0.5 A minimum |
| 5-5 | Applied Voltage Ra | 40 Volts AC (RMS.) continuous maximum, on any signal pin with respect to the shield. | No Breakdown |

6. Environmental Characteristics

| No | Item | Test Condition | Requirement | |
|-----|---------------|--|--------------------|---|
| 6-1 | Thermal Shock | 10 cycles of: a) -55° C for 30 minutes b) +85° C for 30 minutes (ANSI/EIA-364-32C, Condition I) | Appearance | No Damage |
| | | | Contact Resistance | Contact : Change from initial value:30 milliohms maximum Shell Part : Change from initial value:50 milliohms maximum |


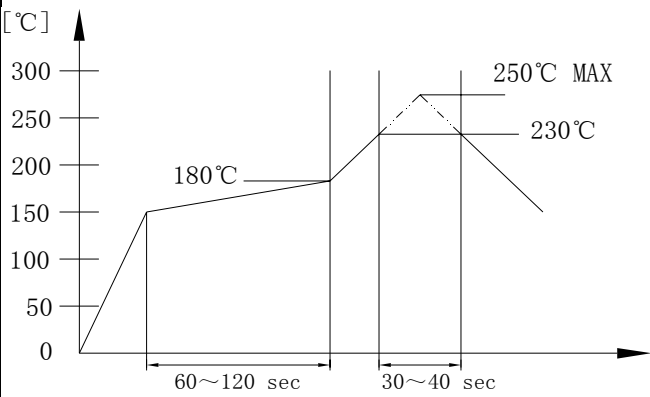
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| No | Item | Test Condition | Requirement | |
| 6-2 | Humidity | Mate connectors together and perform the test as follows. Temperature : +25 to +85° C Relative Humidity : 80 to 95% Duration : 4 cycles (96 hours) Upon completion of the test specimen shall be conditioned ambient room conditions for 24hours, after which specified measurements shall be performed. (ANSI/EIA-364-31B) | Appearance | No Damage |
| | | | Contact Resistance | Contact : Change from initial value: 30 milliohms maximum Shell Change from initial value: 50 milliohms maximum |
| | | Unmated each connectors and perform the test as follows. Temperature : +25 to +85° C Relative Humidity : 80 to 95% Duration : 4 cycles (96 hours) Upon completion of the test, specimen shall be conditioned at ambient room conditions for 24hours, after which specified measurements shall be performed. (ANSI/EIA-364-31B) | Appearance | No Damage |
| | | | Dielectric Withstanding Voltage and Insulation Resistance | Conform to item of Dielectric Withstanding Voltage and Insulation Resistance |
| 6-3 | Thermal Aging | Mate connectors and expose to +105 for 250hours Upon completion 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. (ANSI/EIA-364-17B) (Condition 4, Method A) | Appearance | No Damage |
| | | | Contact Resistance | Contact : Change from initial value: 30 milliohms maximum Shell Part : Change from initial value: 50 milliohms maximum |

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| No | Test description | Procedure | Requirement |
| 6-4 | Withstand Temperature For SMT type |  <p> Preheat : 150~180°C 60~120 sec Mainheat : 230°C or more 30~40 sec Peak : 250°C MAX number of time: 2 times </p> | Appearance No damage |

7. Connector Pin Assignments

| PIN | Signal Assignment |
|-----|-------------------|
| 1 | TMDS Data2+ |
| 3 | TMDS Data2- |
| 5 | TMDS Data1 Shield |
| 7 | TMDS Data0+ |
| 9 | TMDS Data0- |
| 11 | TMDS Clock Shield |
| 13 | CEC |
| 15 | SCL |
| 17 | DDC/CEC Ground |
| 19 | Hot Plug Detect |

| PIN | Signal Assignment |
|-----|-------------------|
| 2 | TMDS Data2 Shield |
| 4 | TMDS Data1+ |
| 6 | TMDS Data1- |
| 8 | TMDS Data0 Shield |
| 10 | TMDS Clock+ |
| 12 | TMDS Clock- |
| 14 | Utility |
| 16 | SDA |
| 18 | +5V Power |