To:

Customer P/N:

UDE P/N: GD2-ZZ-0004

Description: RJ45 1X2 Tab Down Through Hole

10G Base-T

Contact Area: 30μ" Min. Gold

LED : Without LED

---

Spec No. GD217002-00 Update Date 2017/9/4 Revision A

<table>
<thead>
<tr>
<th>Approved</th>
<th>Checked</th>
<th>Prepared</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

RoHS

---

UDE Corp.

No.13, Ln. 68, Neixi Rd., Luzhu Dist., Taoyuan City (33852), Taiwan
TEL: 886-3-3242000 FAX: 886-3-3246611
http://www.ude-corp.com/
<table>
<thead>
<tr>
<th>Issue Date</th>
<th>Revision</th>
<th>Comments</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017/9/4</td>
<td>A</td>
<td>Initial Release</td>
<td>Ella</td>
</tr>
</tbody>
</table>
1. MECHANICAL DIMENSION

Product Dimension

<table>
<thead>
<tr>
<th>Unit: mm</th>
<th>General Tolerance:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X.X : ± 0.38</td>
</tr>
<tr>
<td></td>
<td>X.XX : ± 0.20</td>
</tr>
</tbody>
</table>

Soldering Joint

P/N & D/C

GND

0.20 ± 0.05

± 0.38

0.2~0.6

After Pre-soldering

15.17

0.50 ± 0.08 RJ

28.30 ± 0.38

0.50 Max

11.15 ± 0.25

1.93

2.06 ± 0.25

0.80 ± 0.08

B

2.10 ± 0.25

1.10 ± 0.13

1.00 ± 0.08 GND

3.10 ± 0.08

0.60 ± 0.06

C

0.43

15.17

0.39

0.95 ± 0.08

0.95 TYP.

1.90 TYP.
Recommended PCB Layout. Component side of board
All dimension units are "mm".
All dimension tolerances are ±0.05mm unless otherwise specified.

Table 1

<table>
<thead>
<tr>
<th>Layer</th>
<th>Layout</th>
<th>Trace</th>
<th>Component</th>
<th>Grounding</th>
<th>Test Point</th>
<th>Via Hole</th>
<th>PTH</th>
<th>NPTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component side</td>
<td>X</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td>Inner layer</td>
<td>O</td>
<td>NA</td>
<td>O</td>
<td>NA</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td>Bottom side</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

X--Forbid; O--OK; NA--Not Applicable.
Recommended Panel cutout

2. Packing Information

35 pcs finished goods per tray
8 trays (280 pcs finished goods) per inner box
4 Inner boxes (1120 pcs finished goods) per master carton

- All dimensions follow:
  - FCC subpart F, 68,500, Figure (C)(2)(i) & (C)(2)(ii) & (C)(3)(i)
  - IEC 60603-7

- All plugs must be meeting the requirements of plug Go & No-Go gauge.
  - Gauge follow: FCC subpart F, 68,500, Figure (C)(4)(i) & (C)(5)(i)

- There must be no damage to Housing and Locking Latch.
- There must be no nicks and cuts in cable.
- Durability: 750 cycles generally
4. REQUIREMENTS

Design and Construction
Product shall be of design, construction and physical dimensions specified on applicable.

Material

Terminal Parts (Underplating: 50μ" min. Nickel overall)
- RJ Terminal: Phosphor Bronze, Thickness=0.30mm
- Finish: Contact Area: 30μ" min. Gold
- Input Terminal: Brass, Thickness=0.35mm
- Finish: 100μ" min. Matte Tin
- Case Terminal: Brass, Thickness=0.30mm
- Finish: 100μ" min. Matte Tin
- Ground Terminal: Phosphor Bronze, Thickness=0.20mm
- Finish: 100μ" min. Matte Tin

Plastic Parts
- Housing: PA6T, Black, <UL94V-0>
- Case: PA6T, Black, <UL94V-0>
- Ground IM: PA6T, Black, <UL94V-0>

Shield Parts
- Shield: Stainless steel, Thickness=0.20mm, Pre-soldering
5. Operating and Storage Temperature
   Operating Temperature: 0°C to +70°C
   Storage Temperature: -40°C to +85°C

6. RJ45 specifications
   Insulation Resistance: 500MΩ min.
   Insertion force with the latch depressed: 20N max.
   Removal force with the latch depressed: 20N max.
   Locking Force of Plug Latch: 50N min. @ 60+/-5 sec.
   Durability: 2500 cycles

7. Performance and Test Description
   Product is designed to meet electrical, mechanical and environmental
   performance requirements specified in below table.
   All tests are performed at ambient environmental conditions per MIL-STD-1344A
   and EIA-364 unless otherwise specified.

8. Packaging and Packing
   All parts shall be packaged and packed to protect against physical damage, corrosion
   and deterioration during shipment and storage.
9. ELECTRICAL CHARACTERISTICS @ 25°C

PHY Side
(Input)

Cable Side
(RJ45 Output)

TRD1+ R1  1:1  75Ω  C1 TRP1+
TRCT1 R3  75Ω  C2 TRP1-
TRD1- R2

TRD2+ R4  1:1  75Ω  C3 TRP2+
TRCT2 R6  75Ω  C6 TRP2-
TRD2- R5

TRD3+ R7  1:1  75Ω  C4 TRP3+
TRCT3 R9  75Ω  C5 TRP3-
TRD3- R8

TRD4+ R10 1:1  75Ω  C7 TRP4+
TRCT4 R12 75Ω  C8 TRP4-
TRD4- R11

NC R13
NC R14

2KV 1000pF
Shield
<table>
<thead>
<tr>
<th>Filter Type</th>
<th>Frequency (MHz)</th>
<th>Minimum Reflection Loss (dB)</th>
<th>Load Resistance (Ω)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmitter Filter &amp; Receiver Filter</td>
<td>1~400 MHz</td>
<td>-2.0 dB (-1.4 TYP) max.</td>
<td>100Ω</td>
</tr>
<tr>
<td>Return Loss</td>
<td>1 MHz</td>
<td>-20 dB Min.</td>
<td>Load 100Ω</td>
</tr>
<tr>
<td></td>
<td>100 MHz</td>
<td>-20 dB Min.</td>
<td>Load 100Ω</td>
</tr>
<tr>
<td></td>
<td>200 MHz</td>
<td>-18 dB Min.</td>
<td>Load 100Ω</td>
</tr>
<tr>
<td></td>
<td>300 MHz</td>
<td>-15 dB Min.</td>
<td>Load 100Ω</td>
</tr>
<tr>
<td></td>
<td>400 MHz</td>
<td>-10 dB Min.</td>
<td>Load 100Ω</td>
</tr>
<tr>
<td></td>
<td>500 MHz</td>
<td>-8 dB Min.</td>
<td>Load 100Ω</td>
</tr>
<tr>
<td>Reflected CM to Diff Conversion (REF)</td>
<td>50 MHz</td>
<td>-30 dB Min.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>100 MHz</td>
<td>-27 dB Min.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>200 MHz</td>
<td>-24 dB Min.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>300 MHz</td>
<td>-22 dB Min.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>400 MHz</td>
<td>-21 dB Min.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>500 MHz</td>
<td>-20 dB Min.</td>
<td></td>
</tr>
<tr>
<td>Reflected Diff to CM Conversion (REF)</td>
<td>1 MHz</td>
<td>-48 dB Min.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>100 MHz</td>
<td>-35 dB Min.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>400 MHz</td>
<td>-24 dB Min.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>500 MHz</td>
<td>-24 dB Min.</td>
<td></td>
</tr>
<tr>
<td>CM to Diff Conversion (REF)</td>
<td>50 MHz</td>
<td>-48 dB Min.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>100 MHz</td>
<td>-42 dB Min.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>200 MHz</td>
<td>-36 dB Min.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>300 MHz</td>
<td>-33 dB Min.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>400 MHz</td>
<td>-30 dB Min.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>500 MHz</td>
<td>-28 dB Min.</td>
<td></td>
</tr>
<tr>
<td>CM to CM Attenuation (REF)</td>
<td>1 MHz</td>
<td>-22 dB Min.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>500 MHz</td>
<td>-20 dB Min.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>800 MHz</td>
<td>-20 dB Min.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1000 MHz</td>
<td>-17 dB Min.</td>
<td></td>
</tr>
</tbody>
</table>
Cross Talk (REF)

- 1MHz: -34dB Min.
- 350MHz: -23dB Min.
- 500MHz: -23dB Min.

Inductance (OCL) @ 25°C, 100KHz, 100mV, 8mA DC BIAS

- Input(TRD1+, TRD1-); (TRD2+, TRD2-); (TRD3+, TRD3-); (TRD4+, TRD4-): 160uH Min.

HiPot Test

- PHY Side(input) To Cable Side(output): 1500Vac 60s or 2250Vdc 60s
10. WAVE SOLDERING TEMPERATURE PROFILE

Note:
The measuring point for the specified temperature shall be on the soldered part of the lead.

Temperature Decrease: 10°C/sec or more

- 265±3°C
- 140°C
- 100°C

- 40 sec
- 10±1 sec