

APPROVAL SHEET

To :

Customer P/N :

Part Number : RTK-MA-0010

Description : RJ45 1X4 Tab Up

Through Hole, Long Body

5G Base-T

Contact Area : 30 μ " Min. Gold

LED :L-Green/Yellow; R-Green/Yellow

Light Pipe & POE 60W

100% RoHS material ,without exemption



Halogen
Free

Spec No.
RTK17026-00

Update Date
2017/12/18

Revision
A

| Approved | Checked | Prepared |
|----------|---------|----------|
| | | |

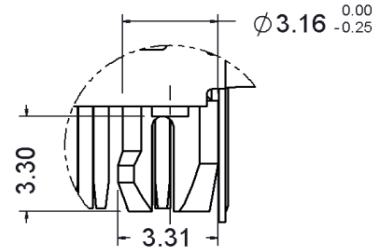
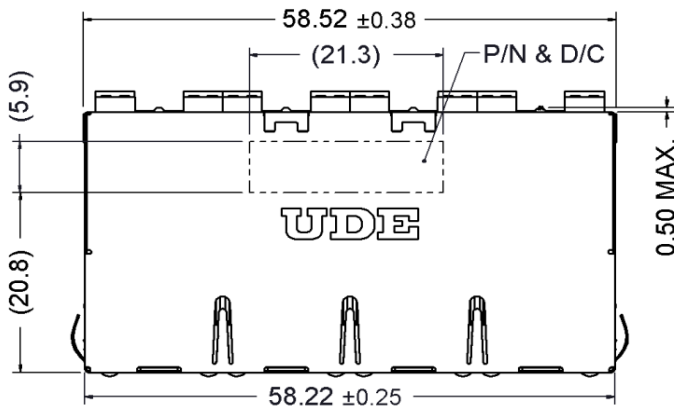
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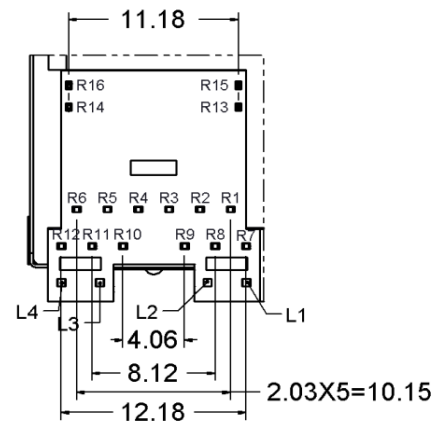
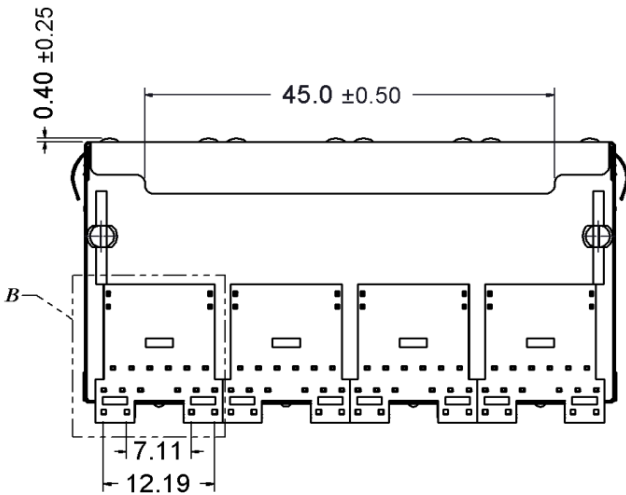
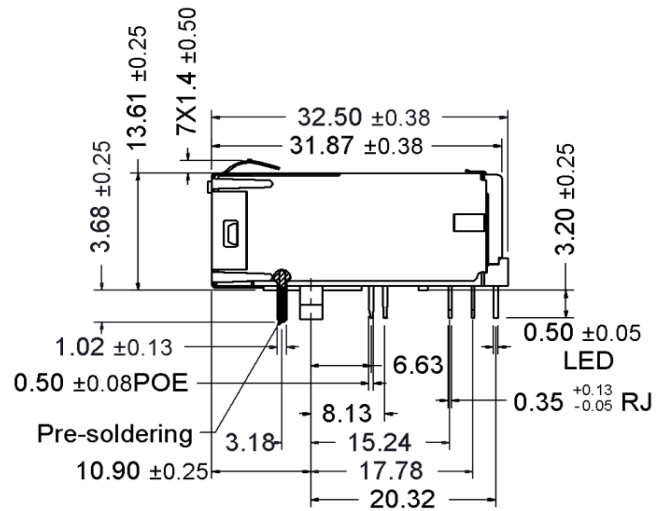
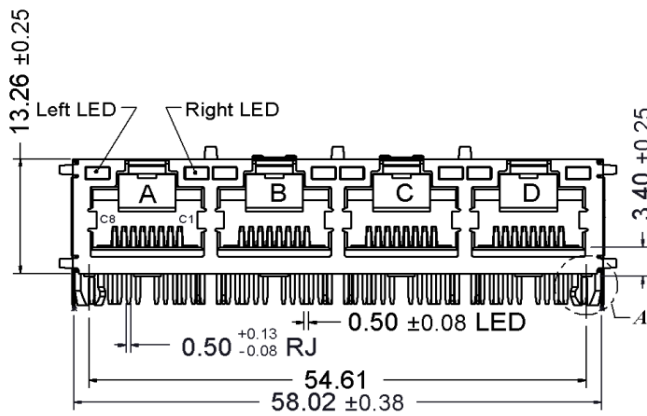
1. MECHANICAL DIMENSION

Product Dimension

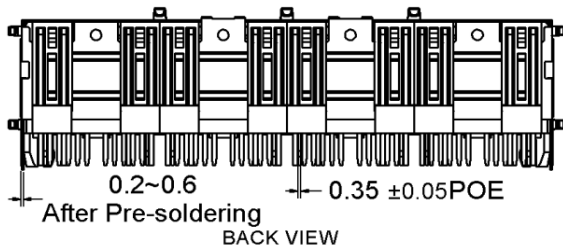
| | | |
|---------|---------------------|---------------|
| Unit:mm | General Tolerance : | X.X : ± 0.38 |
| | | X.XX : ± 0.20 |



Detail A



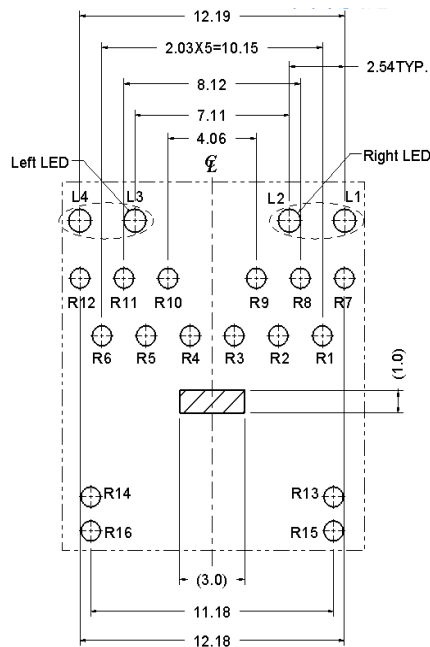
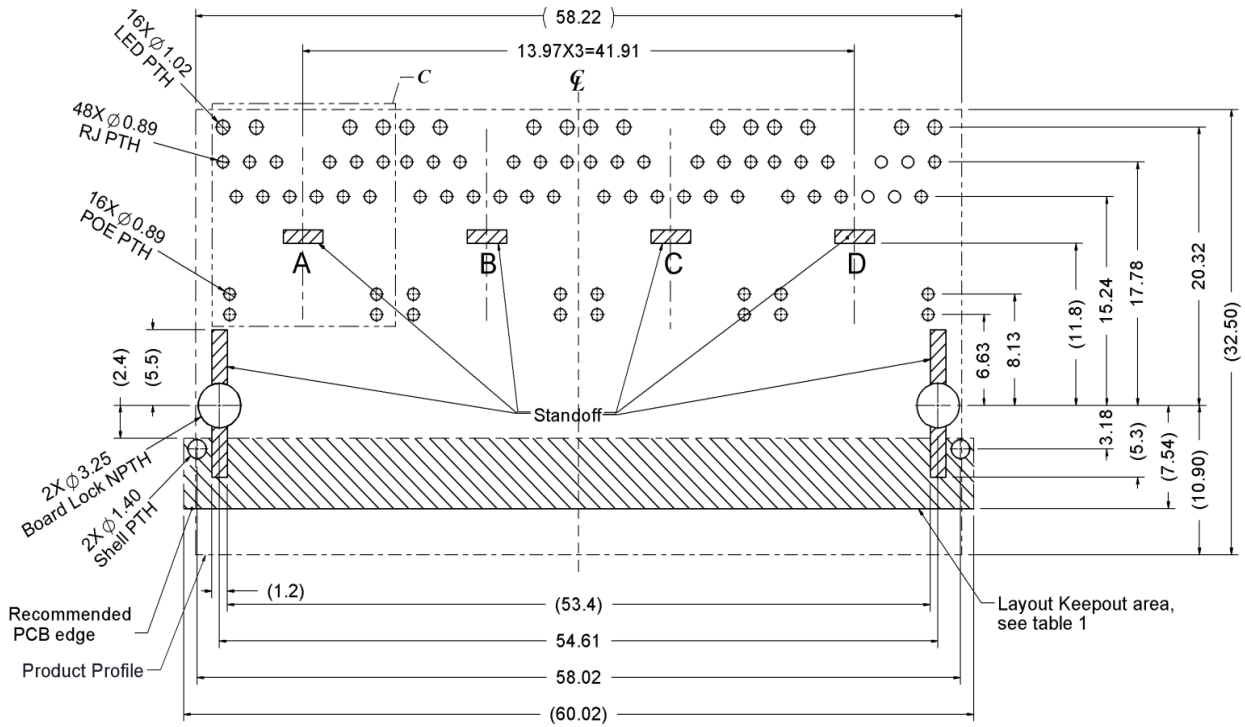
Detail B



Recommended PCB Layout. Component side of board

All dimension units are "mm".

All dimension tolerances are ±0.05mm unless otherwise specified.



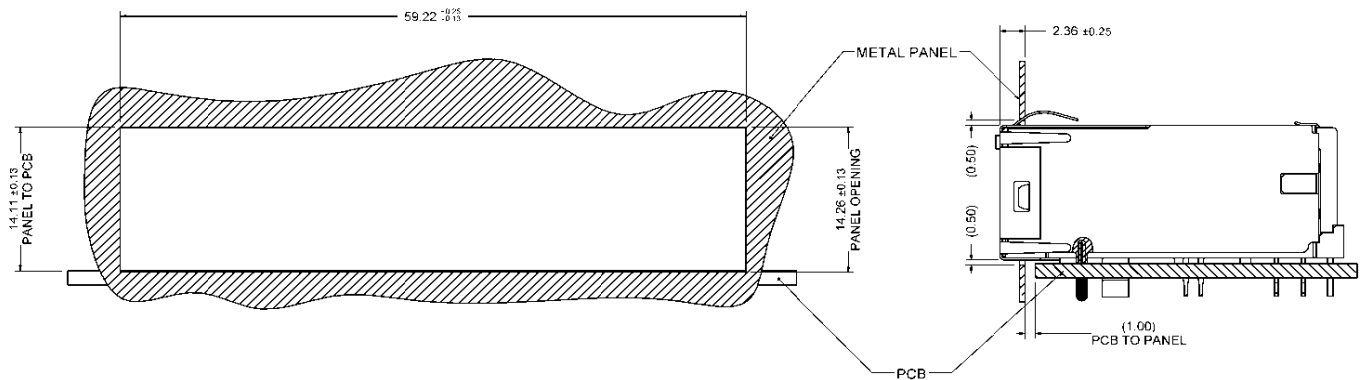
DETAIL C

Table1

| Layout / Layer | Trace | component | Grounding | Test Point | Via Hole | PTH | NPTH |
|----------------|-------|-----------|-----------|------------|----------|-----|------|
| Component side | X | X | O | X | X | X | O |
| Inner layer | O | NA | O | NA | O | X | O |
| Bottom side | O | O | O | O | O | X | O |

X--Forbid; O--OK; NA--Not Applicable.

Recommended Panel cutout



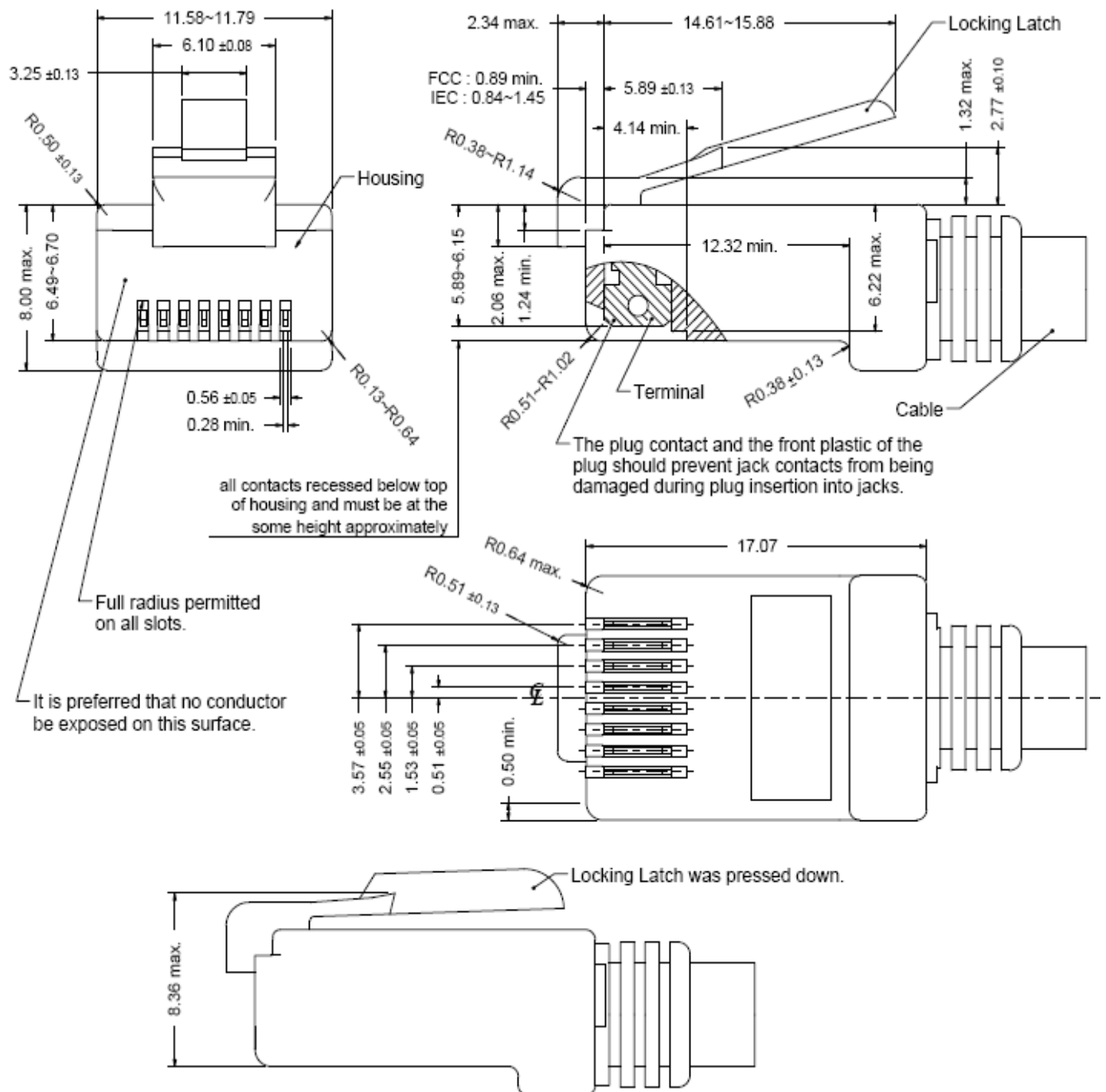
2. Packing Information

16 pcs finished goods per tray

7 trays(112pcs finished goods) per inner box

4 Inner boxes(448 pcs finished goods) per master carton

3. Standard RJ45 Plug Specification



- 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 : 50 μ "min Nickel overall)

RJ Terminal : Phosphor Bronze, Thickness=0.30mm

Finish : Contact Area : 30 μ " min.Gold

Input Terminal : Brass, Thickness=0.35mm

Finish : 100 μ " min.Bright. Tin

Case Terminal : Brass, Thickness=0.30mm

Finish : 100 μ " min. Bright.Tin

Plastic Parts <UL94V-0>

Housing : PA6T, Black

Case : PA6T, Black

Spacer : PA6T, Black

Holder : PA6T, Black

Light Pipe : PC, Transparent

Shield Parts

Front Shield : Stainless Steel, Thickness=0.20mm, unplating

Back Shield : Stainless Steel, Thickness=0.20mm, Pre-soldering

5. Operating and Storage Temperature

Operating Temperature : -40°C to +85°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

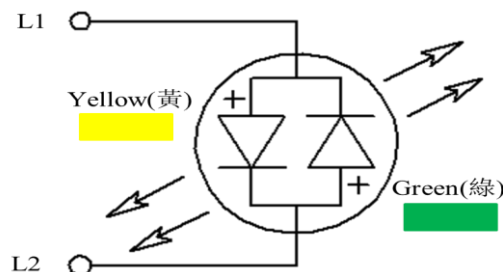
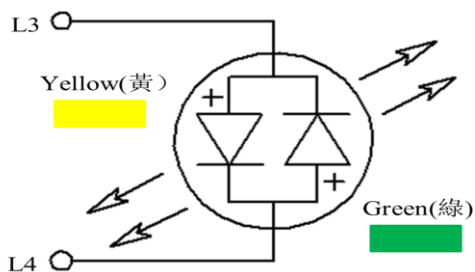
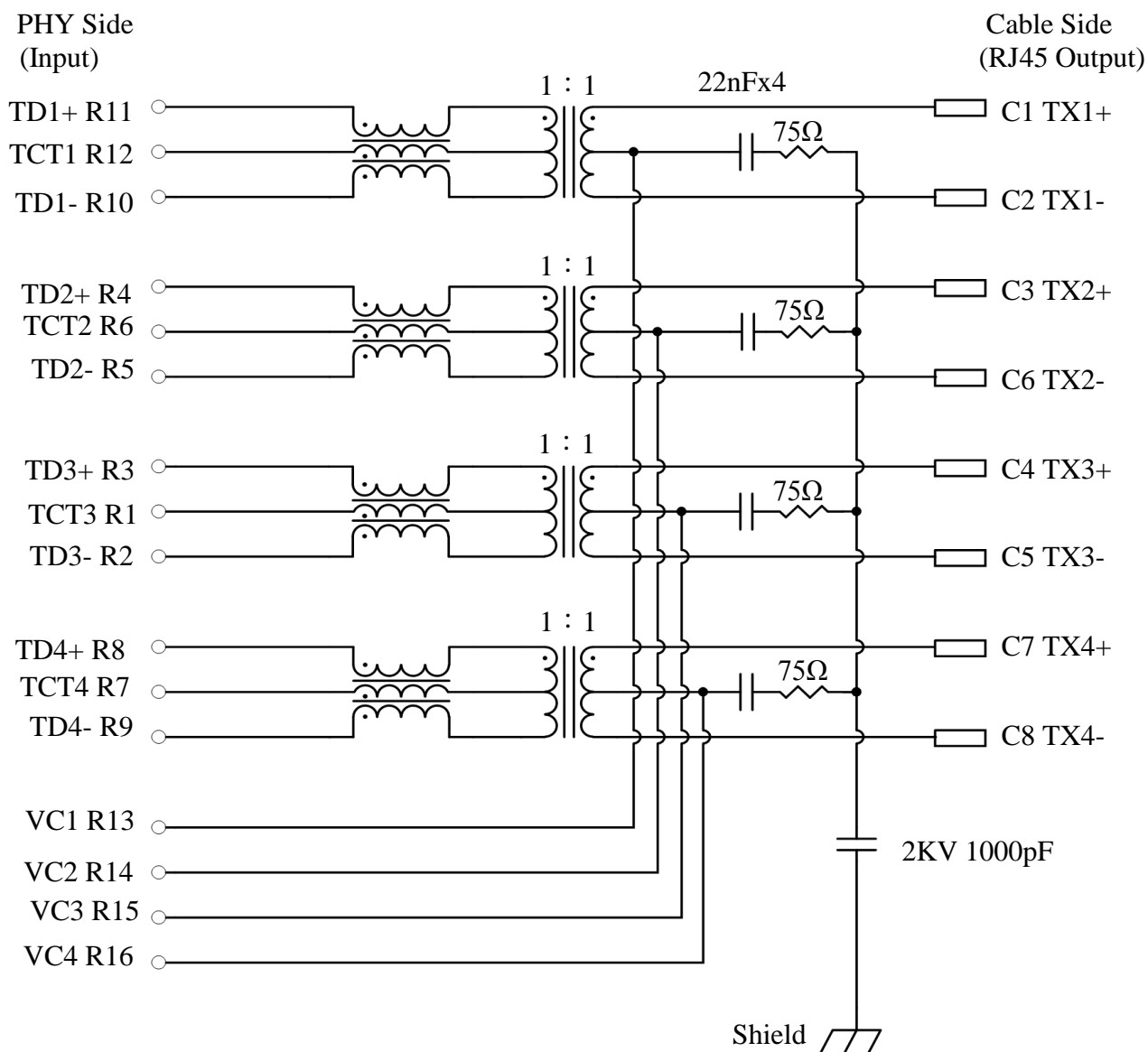
Product is designed to meet electrical, mechanical and environmental performance requirements specified in below table.

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



| Emitting Color | λ_p (nm) | V_f @ $I_f=20\text{mA}$ | I_r @ $V_r=5\text{V}$ |
|----------------|------------------|---------------------------|-------------------------|
| Green | 570 | 1.7 ~2.6 V | 10 μA max. |
| Yellow | 588 | 1.7 ~2.6 V | 10 μA max. |

Transmitter filter & Receiver filter

Type : Balance low pass 100Ω impedance

| | | |
|------------------|------------|-------------|
| Insertion loss : | 1~50MHz | -0.5dB Max. |
| | 50~125MHz | -1.0dB Max. |
| | 125~300MHz | -2.0dB Max. |

| | | | |
|---------------|------------|--|------------------|
| Return loss : | 1~50MHz | -20dB min. | load 100Ω |
| | 50~200MHz | $-20+8*\log(\text{Freq MHz}/50\text{MHz})$ | dB Min load 100Ω |
| | 200~300MHz | $-15+30*\log(\text{Freq MHz}/200\text{MHz})$ | dB Min load 100Ω |

Reflected CM to Diff Conversion(REF)

| | |
|--------|------------|
| 1MHz | -30dB min. |
| 50MHz | -30dB min. |
| 100MHz | -27dB min. |
| 200MHz | -24dB min. |
| 300MHz | -22dB min. |

CM to DM Conversion(REF)

| | |
|---------|------------|
| 1~50MHz | -35dB min. |
| 125MHz | -30dB min. |
| 200MHz | -27dB min. |
| 300MHz | -24dB min. |

Reflected Diff to CM Conversion (REF)

| | |
|-----------|---|
| 1~10MHz | -48dB min. |
| 10~300MHz | $-48+19*\log(\text{Freq MHz}/10\text{MHz})$ |

CM to CM Attenuation (REF)

| | |
|------------|------------|
| 1~200MHz | -25dB min. |
| 200~300MHz | -20dB min. |

Cross Talk (REF)

| | |
|------------|------------|
| 1~125MHz | -30dB min. |
| 125~200MHz | -25dB min. |
| 200~300MHz | -25dB min. |

Inductance @ 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

Balanced DC line current

720mA MAX @57VDC continuous

1.2A MAX @57VDC for 200 milliseconds

10. WAVE SOLDERING TEMPERATURE PROFILE

Note :

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

