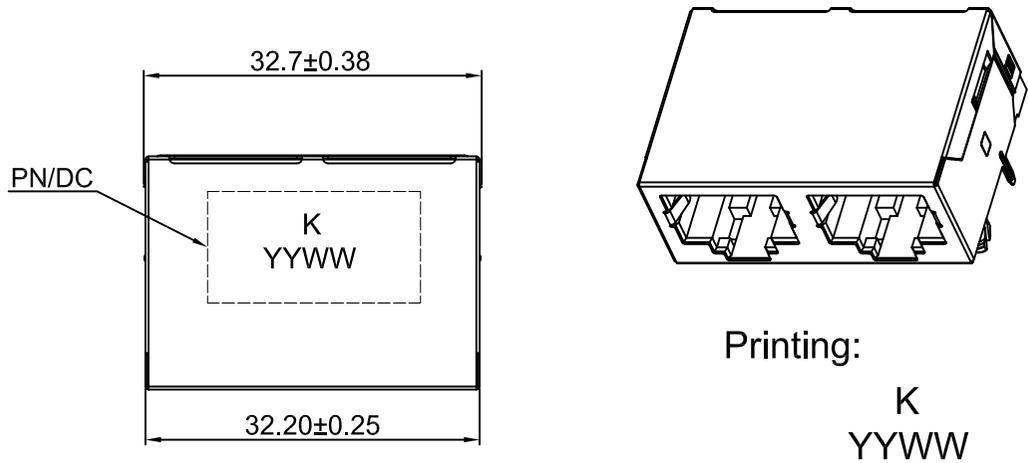
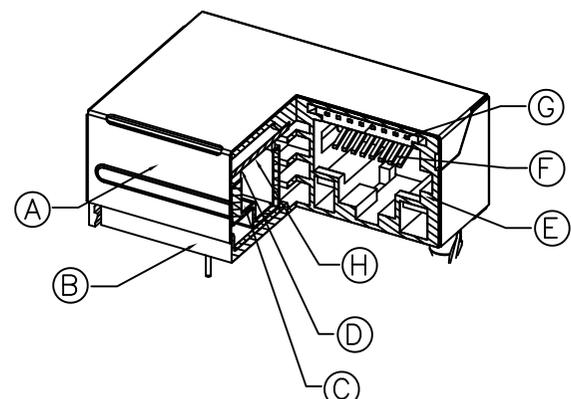
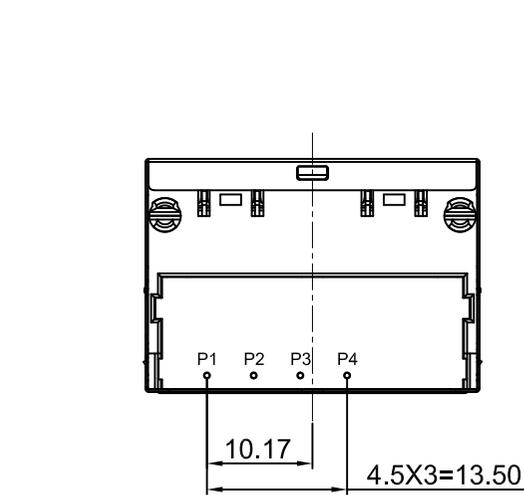
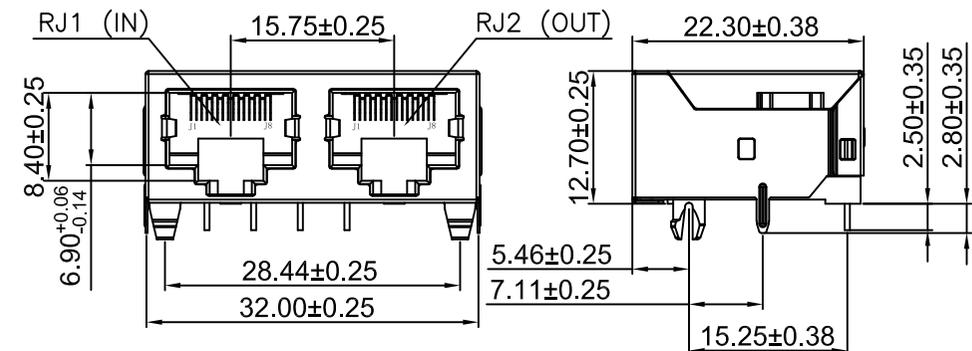


GP Component

1. MECHANICAL DIMENSIONS :

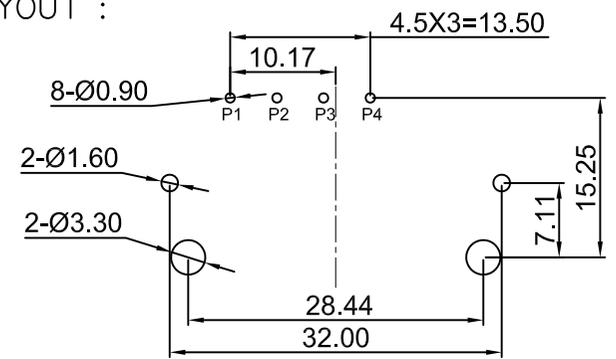


Printing:
K
YYWW



| REV. | ECN NO. | LOCATIONS | DESCRIPTION | DATE | DESIGN |
|------|---------|-----------|---------------------------------------|------------|--------|
| A0.2 | | | Delete Electrical Specification No. 7 | 2024/04/26 | Vince |
| A0.3 | | | Modify Electrical Specification No. 8 | 2024/04/29 | Vince |
| A0.4 | | | Modify Electrical Specification No. 8 | 2024/07/03 | Vince |
| A0.5 | | | Modify Code: J => K | 2024/09/19 | Vince |

2. PCB LAYOUT :



Suggested PCB Layout(Top View)
(Tolerance:±0.05)

MATRIX PART NO:
MRJ 10G-12 T 1826 T RS

Matrix-RJ45
F:10/100
G:10/100/1G/10G
N:Pure Connector

RS:ROHS
HF:Halogen Free
Industrial Temperature

Series Number
S:SMD
T:THT

11:1X1 ; 21:2X1
12:1X2 ; 22:2X2
14:1X4 ; 24:2X4
16:1X6 ; 26:2X6
18:1X8 ; 28:2X8
1U:RJ+USB

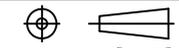
1.Material:

| NO | DESCRIPTION | QTY | MATERIAL | PLATING & COLOR |
|----|-----------------|-----|------------------|--|
| A | METAL SHIELDING | 1 | C2680 T=0.20MM | NICKEL 30u" MIN. |
| B | COVER | 1 | PA46 UL94V-0 | BLACK |
| C | MAG BASE | 1 | 10G MAG BASE | BLACK |
| D | PCB | 1 | FR/4 | GREEN |
| E | HOUSING | 1 | PA46 UL94V-0 | BLACK |
| F | RJ TERMINAL | 16 | C5210-H T=0.30MM | AU 30u"MIN ON CONTACT AREA, TIN PLATED ON SOLDER AREA 80u" MIN, OVERALL NICKEL PLATING 30u" MIN. |
| G | INSE MOLDING | 1 | PA46 UL94V-0 | BLACK |
| H | Insulating tape | 1 | Polyimide | Amber |



Matrix Electronics Co., Ltd

| | | | | | | | |
|---|--|---------------------------------------|--|-----------------------------|--|--|--|
| TOLERANCE: X:X ±0.38 X:XX ±0.25 X:XXX ±0.13 ANGLE: ±3° | | DESIGN BY : Vince Chen | | DATE : 2024/09/19 | | PART NAME: RJ45 CONN W/O LED, 10G Base FILTER | |
| | | CHECKED BY: Hanson Huang | | DATE : 2024/09/19 | | PART NO. MRJ10G-12T1826TRS | |
| | | APPROVED BY1: Richard Hsieh | | DATE : 2024/09/19 | | MOLD NO. NA | |
| | | APPROVED BY2: Richard Hsieh | | DATE : 2024/09/19 | | DRAW NO. SHEET NO. 1 OF 4 | |

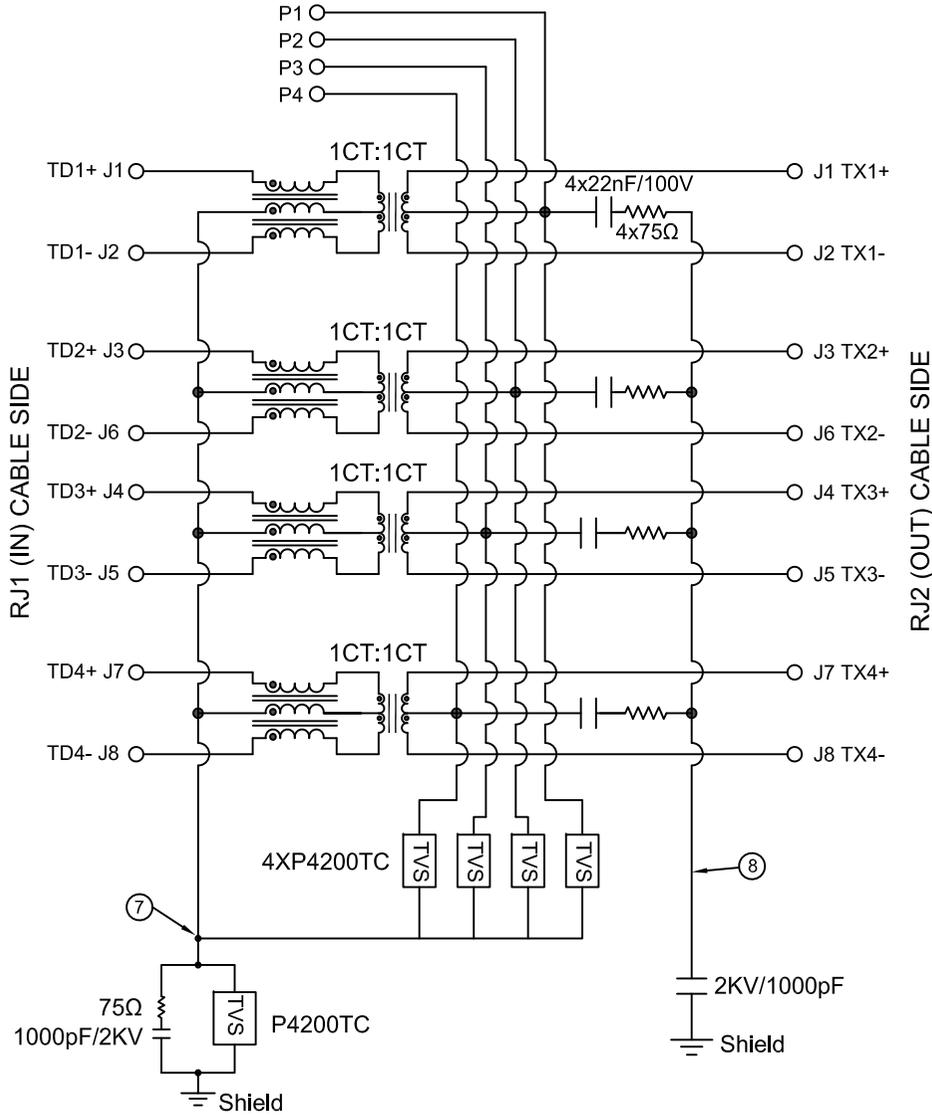


UNIT: mm [inch]

SCALE:1:1 SIZE:A4

GP Component

3. SCHEMATIC:



| REV. | ECN NO. | LOCATIONS | DESCRIPTION | DATE | DESIGN |
|------|---------|-----------|---------------------------------------|------------|--------|
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| A0.4 | | | Modify Electrical Specification No. 8 | 2024/07/03 | Vince |
| A0.5 | | | Modify Code: J => K | 2024/09/19 | Vince |

4. Electrical Specification @25°C:

4.1 Lead-free process, compliant RoHS.

4.2 Inductance(OCL): @100KHZ, 100mV, 15mA DC BIAS.

Input(TD1+, TD1-), (TD2+, TD2-), (TD3+, TD3-), (TD4+, TD4-): 100uH min.

Output(TX1+, TX1-), (TX2+, TX2-), (TX3+, TX3-), (TX4+, TX4-): 100uH min.

4.3 Insertion loss : @1-100MHZ -0.6dB max.

@100-200MHZ -1.0dB max.

@200-300MHZ -1.5dB max.

@300-400MHZ -2.0dB max.

@400-500MHZ -3.0dB max.

4.4 Return loss : @1-100MHZ -20dB min.

@100-200MHZ -17dB min.

@200-300MHZ -14dB min.

@300-400MHZ -10dB min.

@400-500MHZ -8dB min.

4.5 Common to Common Mode Rejection:

@1-100MHZ -22dB min.

@100-300MHZ -21dB min.

@300-500MHZ -20dB min.

4.6 Cross Talk: @1-500MHZ -25dB min.

4.7 DC current: 1.0A MAX @57VDC continuous.

5. Operating and Storage Temperature:

5.1 Operating Temperature : -40°C to +110°C.

5.2 Storage Temperature : -40°C to +110°C.

6. Wave soldering peak temperature: 260°C.

7. The four magnetic center taps are independently connected to the four TVS.

8. PCB and magnetics need to be isolated with insulating tape.

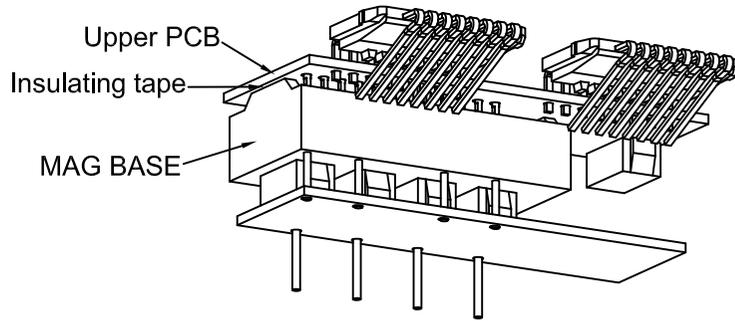


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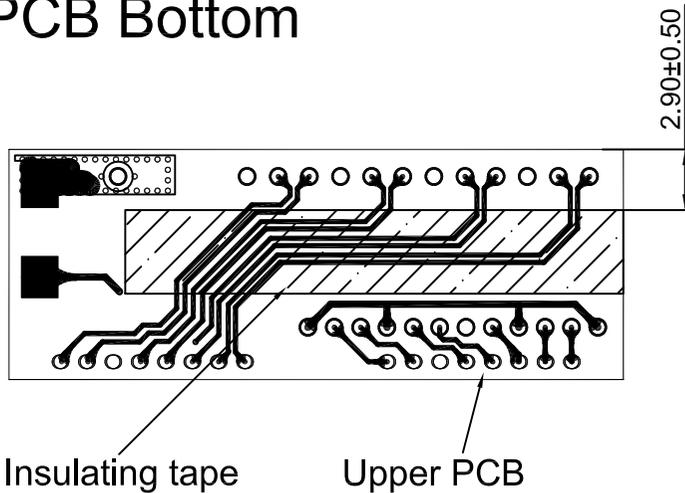
| | | | | |
|---|---------------------------------------|---------------------------------------|--|-----------------|
| TOLERANCE: X X.X ±0.38 X.XX ±0.25 X.XXX ±0.13 ANGLE: ±3° | DESIGN BY : Vince Chen | DATE : 2024/09/19 | PART NAME: RJ45 CONN W/O LED, 10G Base FILTER | |
| | CHECKED BY: Hanson Huang | DATE : 2024/09/19 | PART NO. MRJ10G-12T1826TRS | |
|  UNIT: mm [inch] | APPROVED BY1: Richard Hsieh | DATE : 2024/09/19 | MOLD NO. NA | |
| | SCALE:1:1 SIZE:A4 | APPROVED BY2: Richard Hsieh | DATE : 2024/09/19 | DRAW NO. |
| | | | SHEET NO. | 2 OF 4 |

| REV. | ECN NO. | LOCATIONS | DESCRIPTION | DATE | DESIGN |
|------|---------|-----------|---------------------------------------|------------|--------|
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| A0.5 | | | Modify Code: J => K | 2024/09/19 | Vince |

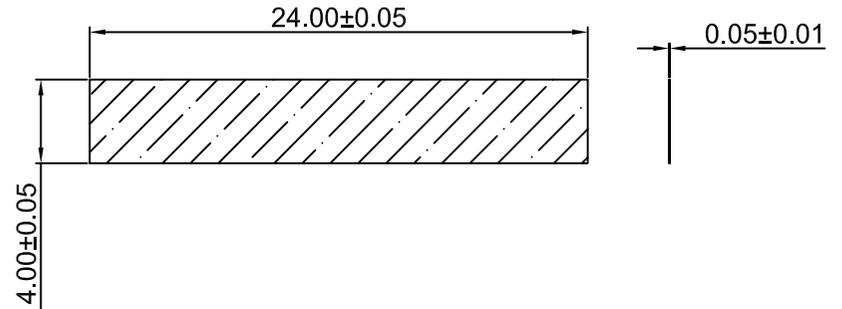
Schematic diagram of insulation tape:



PCB Bottom



Insulating tape size:

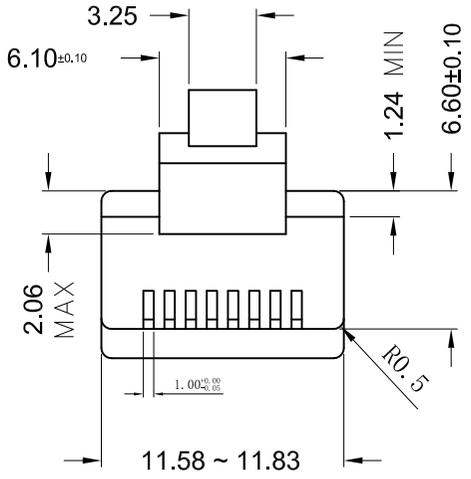


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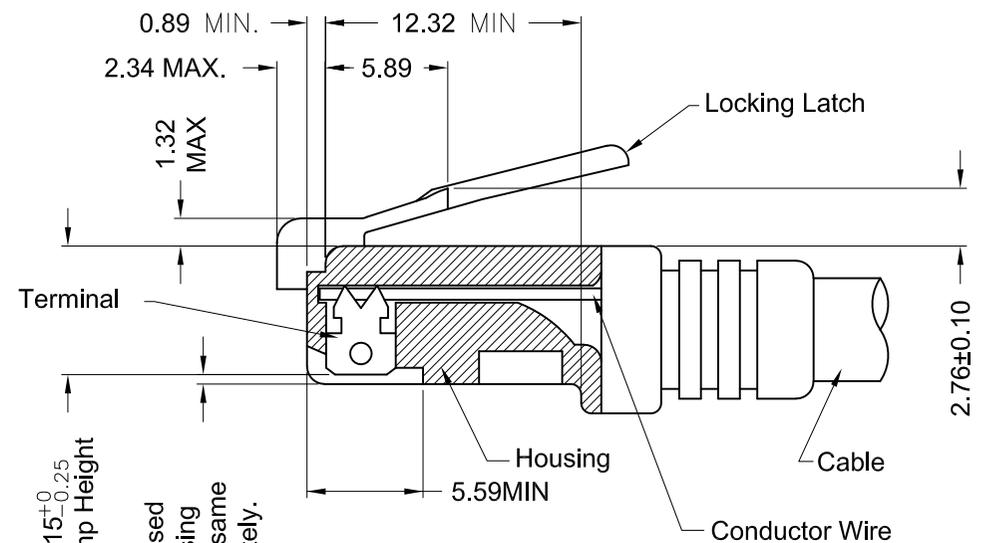
| | | | | |
|--|---------------------------------------|-----------------------------|--|-------------------|
| TOLERANCE: X X:X ±0.38 X:XX ±0.25 X:XXX ±0.13 ANGLE: ±3° | DESIGN BY : Vince Chen | DATE : 2024/09/19 | PART NAME: RJ45 CONN W/O LED, 10G Base FILTER | |
| | CHECKED BY: Hanson Huang | DATE : 2024/09/19 | PART NO. | MRJ10G-12T1826TRS |
| UNIT: mm [inch] SCALE:1:1 SIZE:A4 | APPROVED BY1: Richard Hsieh | DATE : 2024/09/19 | MOLD NO. | NA |
| | APPROVED BY2: Richard Hsieh | DATE : 2024/09/19 | DRAW NO. | |
| | | | SHEET NO. | 3 OF 4 |

GP Component

| REV. | ECN NO. | LOCATIONS | DESCRIPTION | DATE | DESIGN |
|------|---------|-----------|---------------------------------------|------------|--------|
| A0.2 | | | Delete Electrical Specification No. 7 | 2024/04/26 | Vince |
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| A0.5 | | | Modify Code: J => K | 2024/09/19 | Vince |

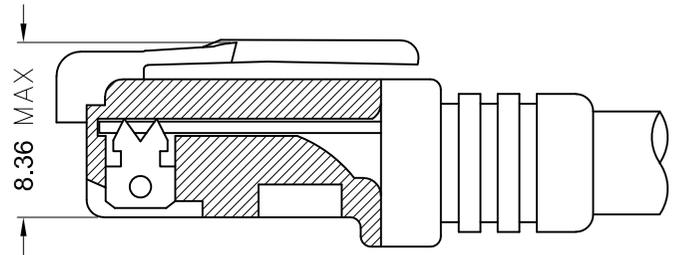


* There must be no damage to housing or locking latch. There must be no nicks or cuts in cable.
 * Durability : 750 cycles generally



All contacts recessed below top of housing and must be at the same height approximately.

FOLLOW SPECIFICATION : FCC, PART 68, SUBPART F FIGURE 68.500 (C)(2)(i) AND IEC 603-7 FIGURE 23 & 24



FOLLOW SPECIFICATION : FCC, PART 68, SUBPART F FIGURE 68.500 (C)(2)(ii)

STANDARD MODULAR PLUG ASSEMBLY

| | | | | |
|---|---------------------------------------|-----------------------------|--|--|
|  Matrix Electronics Co., Ltd | | | | |
| TOLERANCE: X ±0.38 X.X ±0.25 X.XXX ±0.13 ANGLE: ±3° | DESIGN BY : Vince Chen | DATE : 2024/09/19 | PART NAME: RJ45 CONN W/O LED, 10G Base FILTER | |
| | CHECKED BY: Hanson Huang | DATE : 2024/09/19 | PART NO. MRJ10G-12T1826TRS | |
|  UNIT: mm [inch] SCALE:1:1 SIZE:A4 | APPROVED BY1: Richard Hsieh | DATE : 2024/09/19 | MOLD NO. NA | |
| | APPROVED BY2: Richard Hsieh | DATE : 2024/09/19 | DRAW NO. | |
| | | | SHEET NO. 4 OF 4 | |