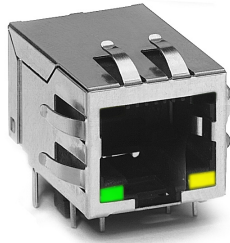


Description:

100 Base-TX (Fast Ethernet) RJ45 1x1 Tab-DOWN with LEDs 8-pin (JO series) integrated magnetics connector (ICM), designed to support applications, such as SOHO (ADSL modems), LAN-on-Motherboard (LOM), Hub and Switches.



JO006D21BNL shown

Features and Benefits:

- Ⓜ RoHS peak wave solder temperature rating 260°C
- Ⓜ Suitable for CAT 5 & 6 Fast Ethernet Cable or better UTP

Electrical Performance Summary:

- Ⓜ Meets or exceeds IEEE 802.3 standard for 100Base-TX
- Ⓜ 350 µH minimum OCL with 8mA bias current
- Ⓜ Minimum 1500Vrms isolation per IEEE 802.3 requirement

Electrical Specifications @ 25°C — Operating Temperature 0°C to +70°C

| RoHS Compliant Part Number | Turns Ratios | | Mech. Drawing | EMI Fingers | LEDs ¹ (L/R) | Insertion Loss (dB TYP) | Return Loss (dB TYP) 100W ±15W | | | | | Crosstalk (dB TYP) | | | Common Mode Rejection (dB TYP) | | Hipot (VDC) |
|----------------------------|--------------|-------|---------------|-------------|-------------------------|-------------------------|-----------------------------------|----------|-----------|-----------|-----------|--------------------|-----------|------------|--------------------------------|------------|-------------|
| | TX | RX | | | | | 1-65 MHz | 1-10 MHz | 10-30 MHz | 30-60 MHz | 60-80 MHz | 1-30 MHz | 30-60 MHz | 60-100 MHz | 1-50 MHz | 50-150 MHz | |
| JO006D01BNL | 1CT:1 | 1CT:1 | A | No | G/Y | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO006D21N1L | 1CT:1 | 1CT:1 | D | YES | N/A | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO006D21BNL | 1CT:1 | 1CT:1 | B | YES | G/Y | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO011D01N1L | 1CT:1 | 1CT:1 | C | No | N/A | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO011D01BNL | 1CT:1 | 1CT:1 | A | No | G/Y | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO011D21N1L | 1CT:1 | 1CT:1 | D | YES | N/A | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO011D21BNL | 1CT:1 | 1CT:1 | B | YES | G/Y | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO011D21ENL | 1CT:1 | 1CT:1 | B | YES | G/G | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO012D21N1L | 1CT:1 | 1CT:1 | D | YES | N/A | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO018D21N1L | 1CT:1.414 | 1CT:1 | D | YES | N/A | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO018D21ENL | 1CT:1.414 | 1CT:1 | B | YES | G/G | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO026D01N1L | 1CT:1 | 1CT:1 | C | No | N/A | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO026D01BNL | 1CT:1 | 1CT:1 | A | No | G/Y | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO026D01ENL | 1CT:1 | 1CT:1 | A | No | G/G | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO026D21N1L | 1CT:1 | 1CT:1 | D | YES | N/A | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO026D21BNL | 1CT:1 | 1CT:1 | B | YES | G/Y | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO026D21ENL | 1CT:1 | 1CT:1 | B | YES | G/G | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO026D21FNL ² | 1CT:1 | 1CT:1 | B | YES | G/Y | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO026D21GNL ³ | 1CT:1 | 1CT:1 | B | YES | YG/G | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO0-0014N1L | 1CT:1 | 1CT:1 | C | No | N/A | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO0-0045N1L | 1CT:1 | 1CT:1 | A | No | G/Y | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO0-0061N1L | 1CT:1 | 1CT:1 | F | YES | N/A | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |
| JO0-0065N1L | 1CT:1 | 1CT:1 | E | YES | G/Y | -1 | -20 | -16 | -12 | -10 | -40 | -35 | -30 | -30 | -20 | 2250 | |

Notes: 1. LEDs Left/right: G=green, Y=yellow, N/A=none, YG=Bi-color LED Yellow Green. 2. LEDs with internal resistor. 3. Bi-color Left LED.

RJ45 Durability Testing Rating

| Part Number | Mating Force (MAX) | Unmating Force (MAX) | Durability | Plug to Jack Retention (MIN) |
|-------------|--------------------|----------------------|----------------|------------------------------|
| JO Series | 5 lbs./2.268 kgs. | 5 lbs./2.268 kgs. | 750 Insertions | 20 lbs./9.072 kgs. |

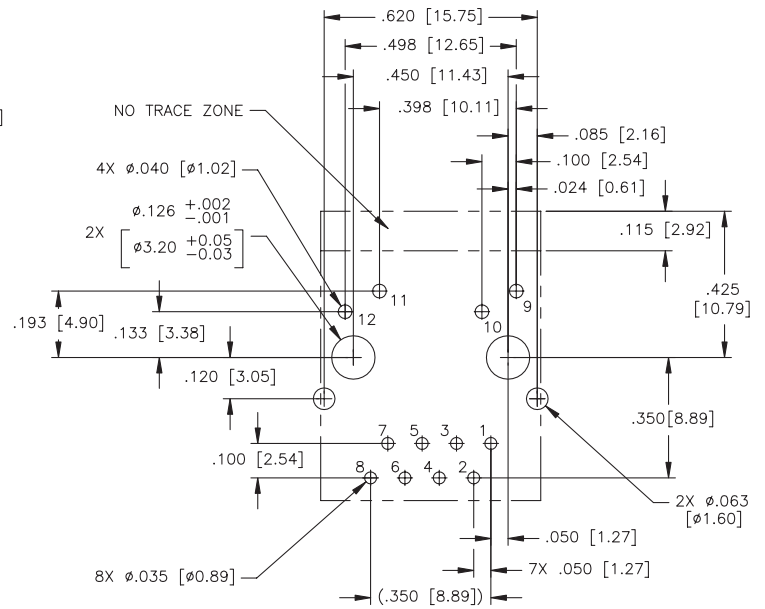
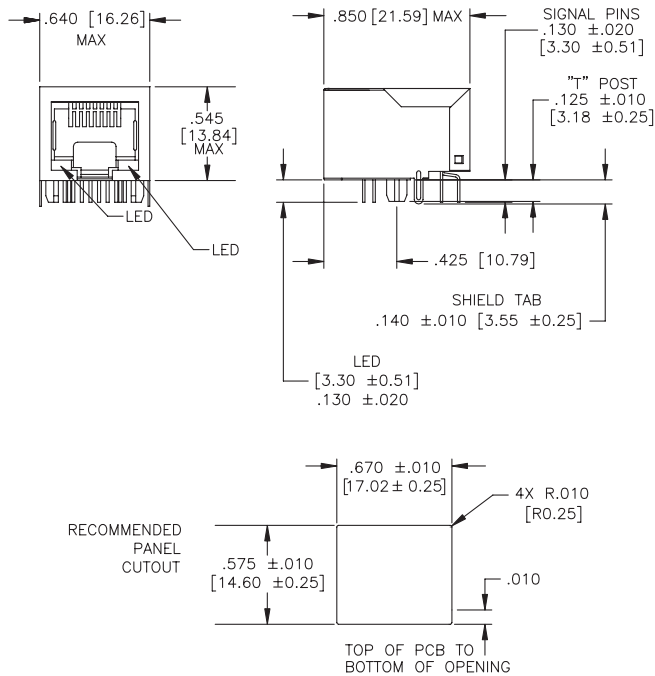
RJ45 Material Specification

| Part Number | Shield | | Contact | | | Housing | | MSL ³ Rating |
|-------------|----------|---|-----------------|---|--|---------------|---------------|-------------------------|
| | Material | Finish | Material | Plating Area | Solder Area ² | Material | Specification | |
| JO Series | Brass | 10-20m inches Nickel over 10-20m inches Brass | Phosphor Bronze | Nickel underplating and selective gold plating 15µ inches | 120µ inches Sn100 over 50µ inches nickel | Thermoplastic | UL 94 V-0 | 1 |

Notes: 1. Connector dimensions comply with FCC dimension requirements. 2. RoHS parts are tin matte finish over nickel. 3. MSL = Moisture Sensitivity Level rating from 1 to 5 (highest = 1, lowest = 5)

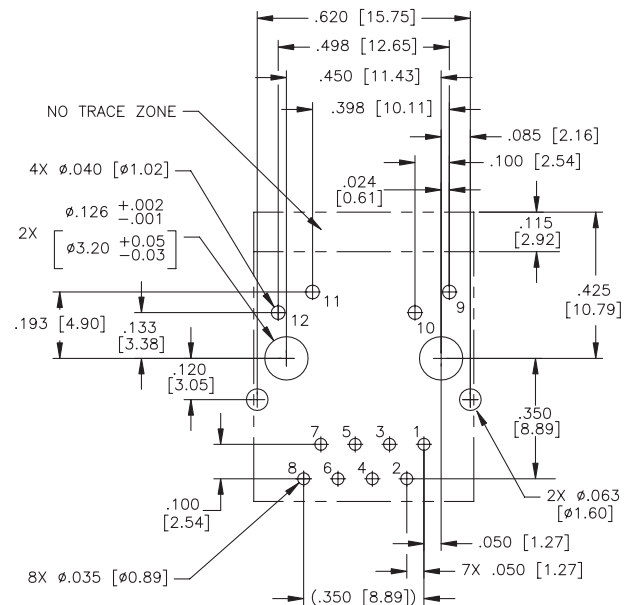
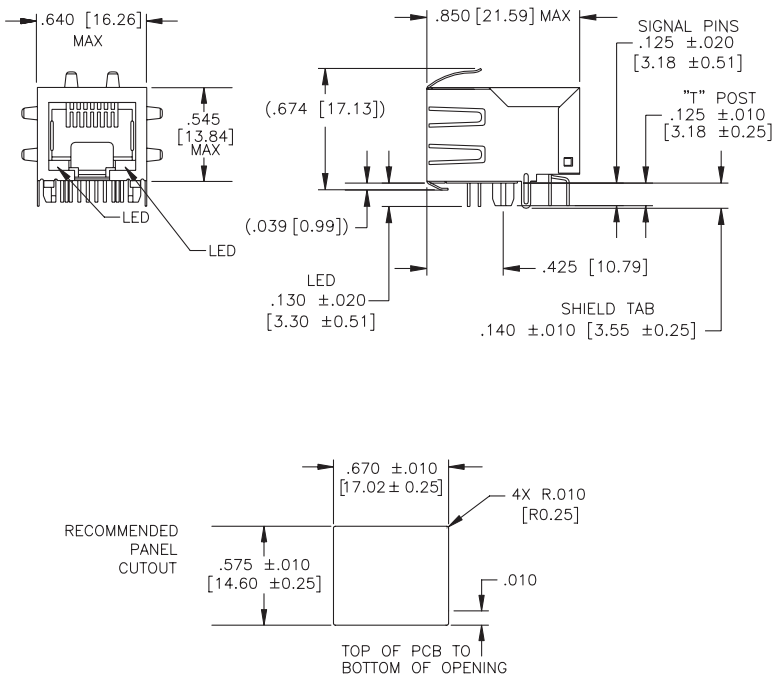
J0 Series Mechanicals

A



SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE
PCB LAYOUT DIMENSIONS TO BE ±.002 UNLESS OTHERWISE SPECIFIED
SCALE: 4/1

B



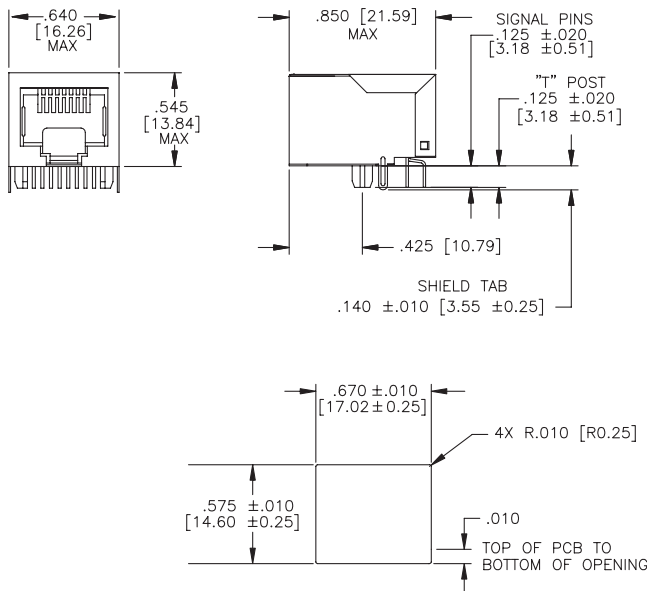
SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE
PCB LAYOUT DIMENSIONS TO BE ±.002 UNLESS OTHERWISE SPECIFIED
SCALE: 4/1

Dimensions: $\frac{\text{Inches}}{\text{mm}}$

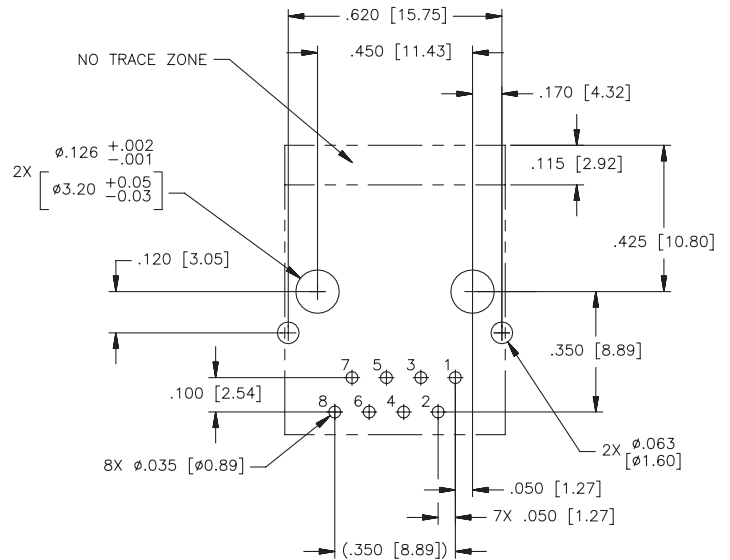
Unless otherwise specified, all tolerances are ±.010 / 0.25

J0 Series Mechanicals (continued)

C



RECOMMENDED PANEL CUTOUT

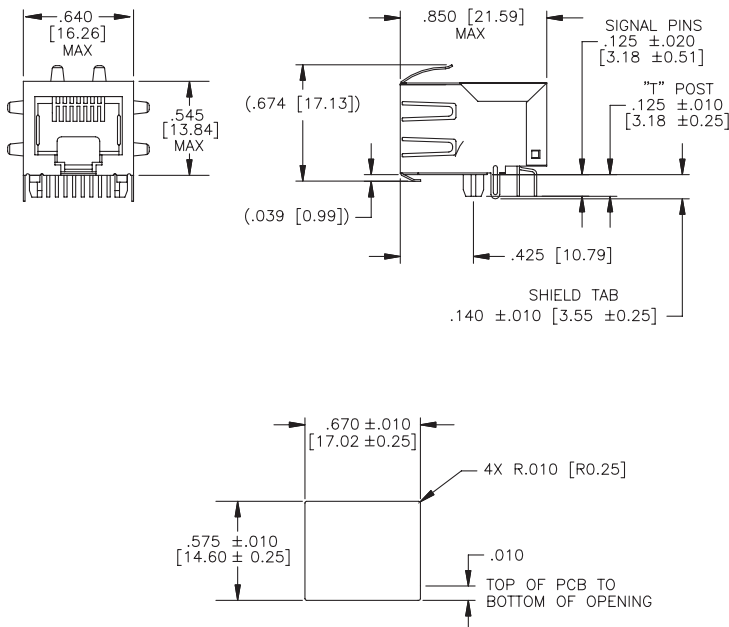


SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE
PCB LAYOUT DIMENSIONS TO BE ±.002 UNLESS OTHERWISE SPECIFIED
SCALE: 4/1

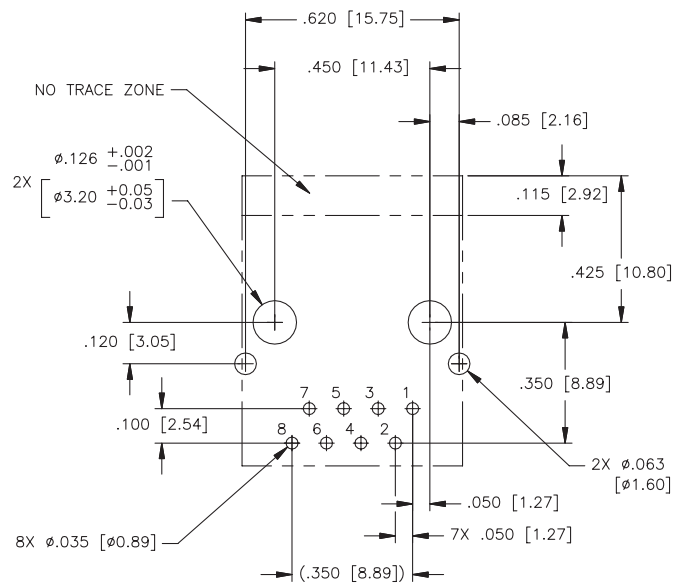
Dimensions: Inches
mm

Unless otherwise specified, all tolerances are ±.010 / 0.25

D



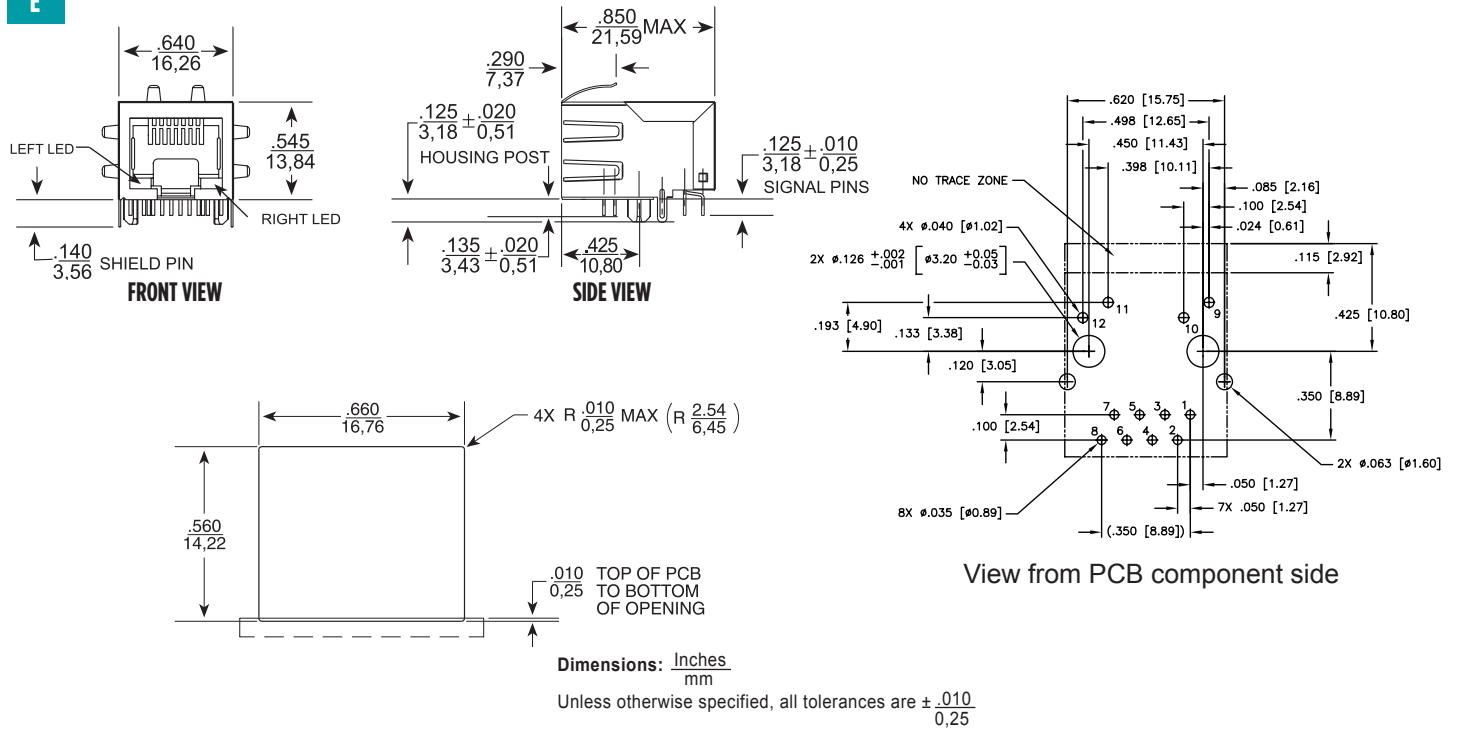
RECOMMENDED PANEL CUTOUT



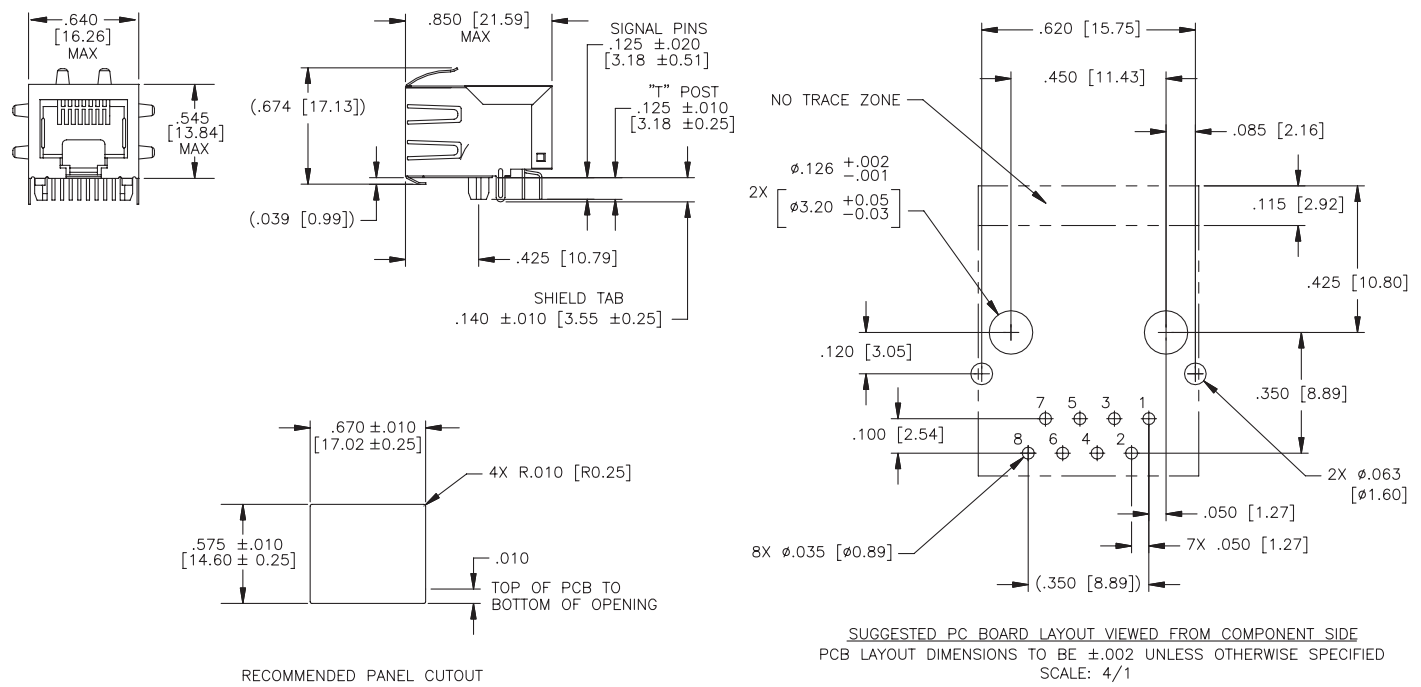
SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE
PCB LAYOUT DIMENSIONS TO BE ±.002 UNLESS OTHERWISE SPECIFIED
SCALE: 4/1

J0 Series Mechanicals (continued)

E

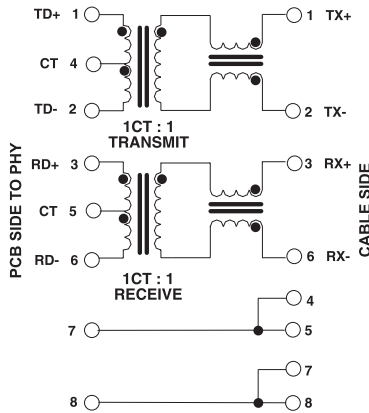


F

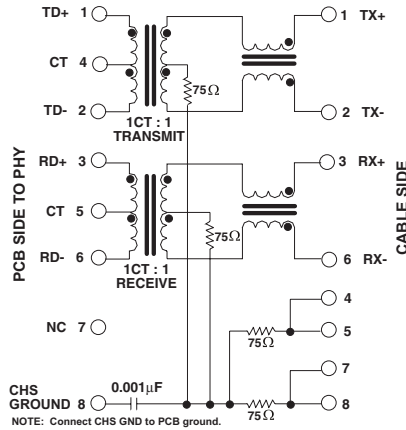


J0 Series Electrical Schematics

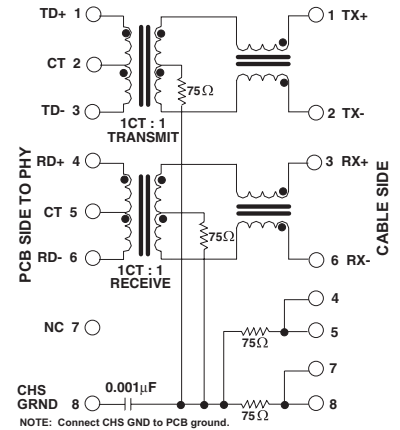
J0006



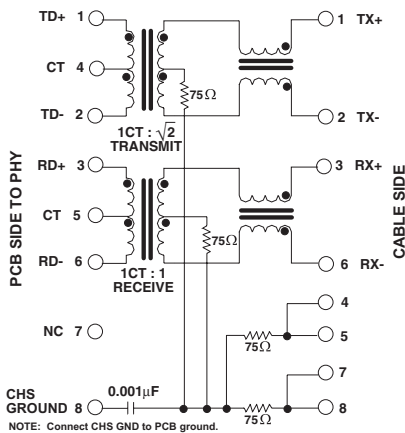
J0011/J00-0014NL/45NL/61NL/65NL



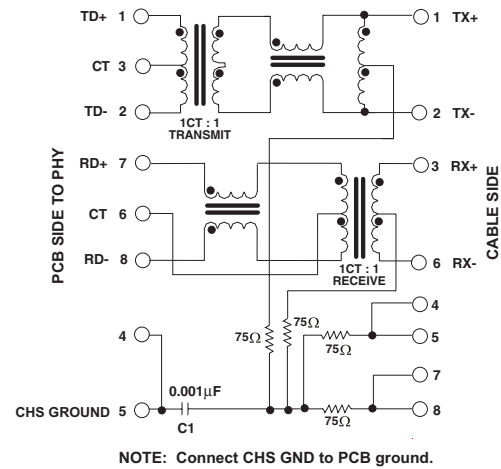
J0012



J0018

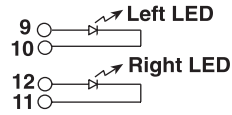


J0026

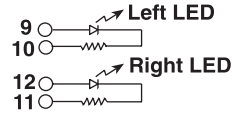


LED Configuration

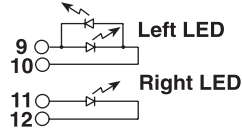
LEDs without internal resistors



LEDs with internal resistors



Bi-color LED option with internal resistors



| Standard LED | Wavelength | Forward* V(MAX) | (TYP) |
|--------------|------------|-----------------|-------|
| Yellow | 585 nm | 2.5 V | 2.1 V |
| Green | 565 nm | 2.5 V | 2.2 |

* Using an internal resistor within the LED increases the voltage rating of the diode from 2.5 V to 5.0 V (assumes bias current = 20 mA).

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