

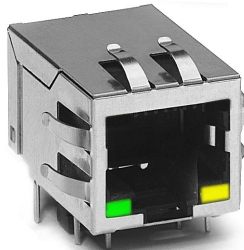
# PULSEJACK™

## 1x1 Tab-DOWN RJ45





### Description:

10/100 Base-TX RJ45 1x1 Tab-DOWN with LEDs 8-pin (J0 series) integrated magnetics connector (ICM), designed to support applications, such as SOHO (ADSL modems), LAN-on-Motherboard (LOM), Hub and Switches.






J0006D21BNL 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-T
-  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 <sup>1</sup> (L/R) | Insertion Loss (dB TYP) | Return Loss (dB TYP)<br>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 |             |
| J0006D01BNL                | 1CT:1        | 1CT:1 | A             | No          | G/Y                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0006D21NL                 | 1CT:1        | 1CT:1 | E             | YES         | N/A                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0006D21BNL                | 1CT:1        | 1CT:1 | B             | YES         | G/Y                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0011D01NL                 | 1CT:1        | 1CT:1 | C             | No          | N/A                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0011D01BNL                | 1CT:1        | 1CT:1 | A             | No          | G/Y                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0011D21NL                 | 1CT:1        | 1CT:1 | E             | YES         | N/A                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0011D21BNL                | 1CT:1        | 1CT:1 | B             | YES         | G/Y                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0011D21ENL                | 1CT:1        | 1CT:1 | B             | YES         | G/G                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0012D21NL                 | 1CT:1        | 1CT:1 | E             | YES         | N/A                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0018D21NL                 | 1CT:1.414    | 1CT:1 | E             | YES         | N/A                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0018D21ENL                | 1CT:1.414    | 1CT:1 | B             | YES         | G/G                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0024D21NL                 | 1CT:2        | 1CT:1 | E             | YES         | N/A                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0024D21BNL                | 1CT:2        | 1CT:1 | B             | YES         | G/Y                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0026D01NL                 | 1CT:1        | 1CT:1 | D             | No          | N/A                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0026D01BNL                | 1CT:1        | 1CT:1 | A             | No          | G/Y                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0026D01ENL                | 1CT:1        | 1CT:1 | A             | No          | G/G                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0026D01FNL <sup>2</sup>   | 1CT:1        | 1CT:1 | A             | No          | G/Y                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0026D21NL                 | 1CT:1        | 1CT:1 | E             | YES         | N/A                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0026D21BNL                | 1CT:1        | 1CT:1 | B             | YES         | G/Y                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0026D21ENL                | 1CT:1        | 1CT:1 | B             | YES         | G/G                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0026D21FNL <sup>2</sup>   | 1CT:1        | 1CT:1 | B             | YES         | G/Y                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0026D21GNL <sup>3</sup>   | 1CT:1        | 1CT:1 | B             | YES         | YG/G                    | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0033D21NL                 | 1.25CT:1     | 1CT:1 | E             | YES         | N/A                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0035D21BNL                | 1CT:1        | 1CT:1 | F             | YES         | G/Y                     | -1                      | -20                               | -16      | -12       | -10       | -40       | -35                | -30       | -30        | -20                            | 2250       |             |
| J0073D01BNL                | 1CT:2.5      | 1CT:1 | A             | No          | 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

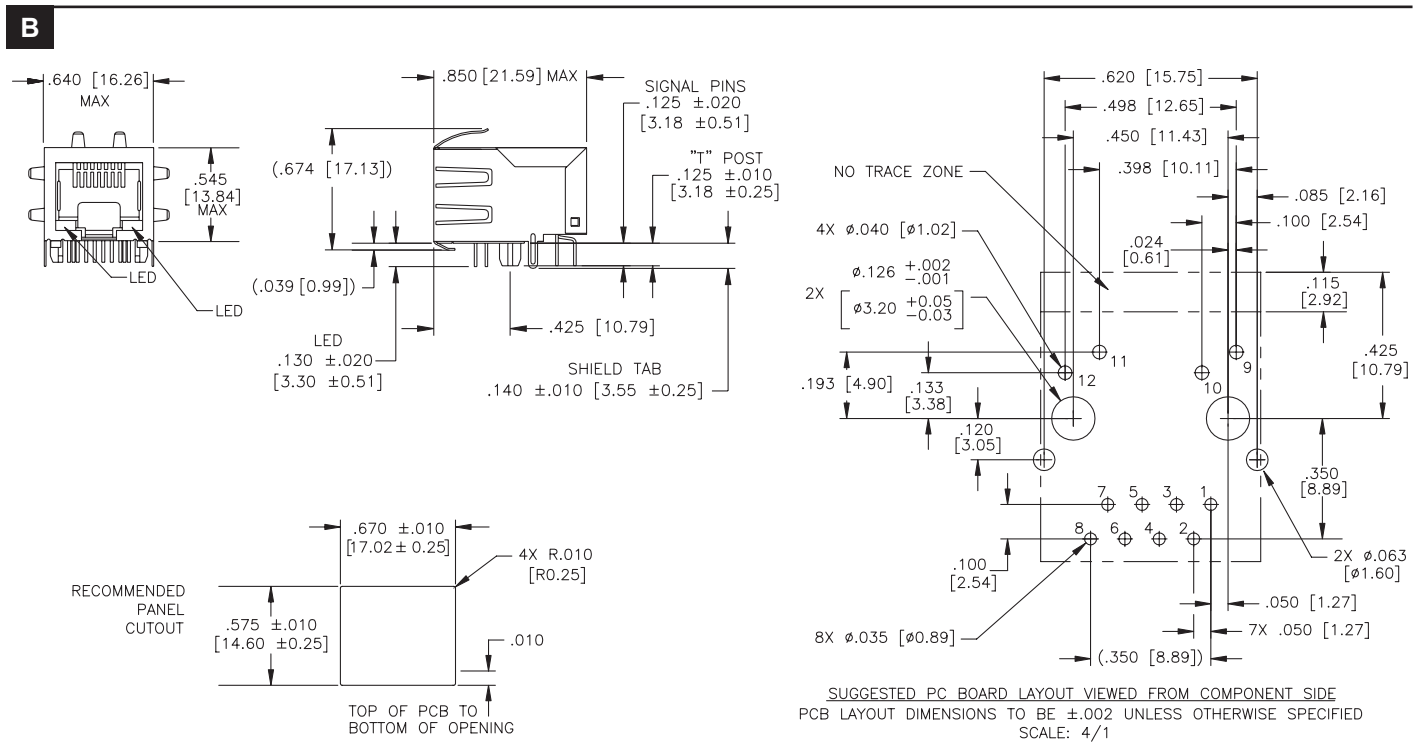
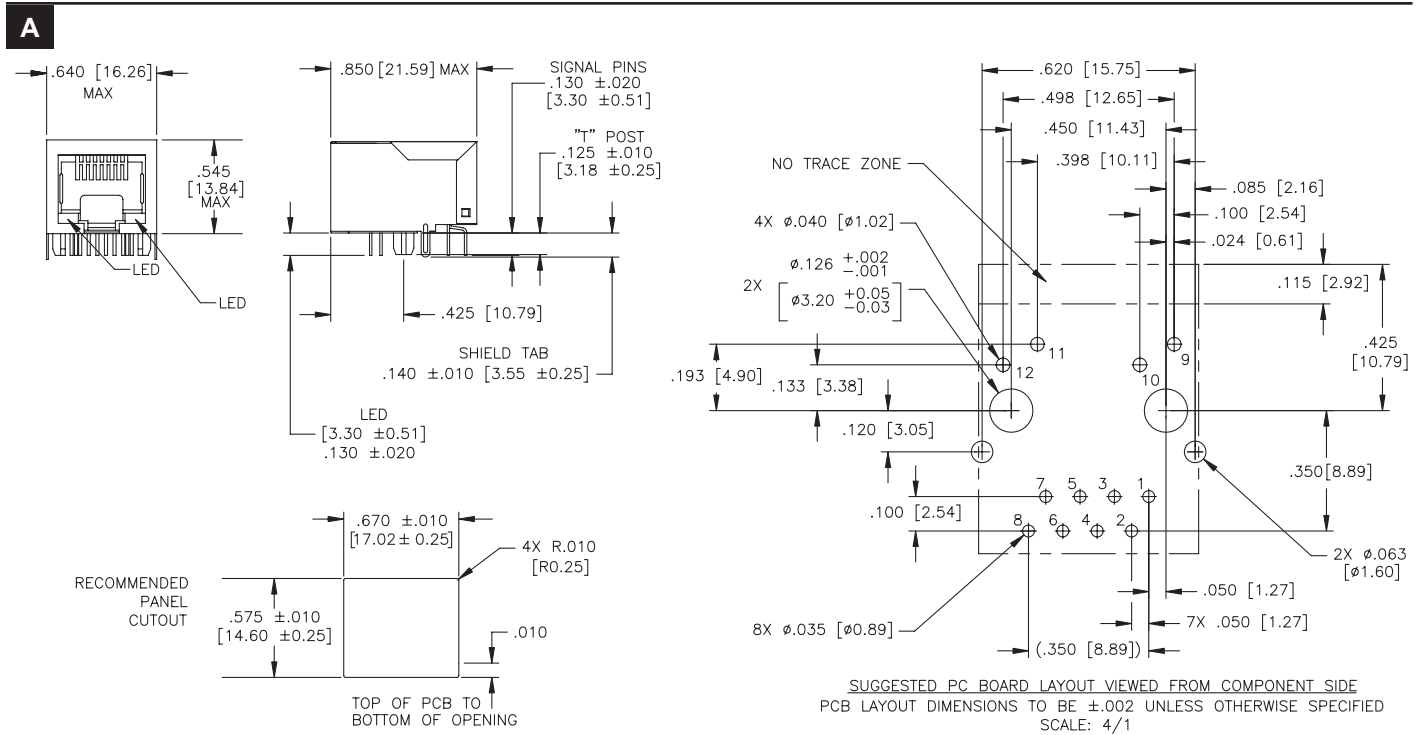
| Part Number | Mating Force (MAX) | Unmating Force (MAX) | Durability     | Plug to Jack Retention (MIN) |
|-------------|--------------------|----------------------|----------------|------------------------------|
| J0 Series   | 5 lbs./2.268 kgs.  | 5 lbs./2.268 kgs.    | 750 Insertions | 20 lbs./9.072 kgs.           |

### RJ45 Material Specification

| Part Number | Shield   |   | Contact         |   |  | Housing       |               | MSL <sup>3</sup> Rating |
|-------------|----------|---|-----------------|---|--|---------------|---------------|-------------------------|
|             | Material | Finish  | Material        | Plating Area  | Solder Area <sup>2</sup>                     | Material      | Specification |                         |
| J0 Series   | Brass    | 10-20m inches Nickel over 10-20m inches Brass | Phosphor Bronze | Nickel underplating and selective gold plating 15µ inches | 120µ inches Sn90/Pb10 over 50µ inches nickel | Thermoplastic | UL 94 V-0     | 1                       |

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

### J0 Series Mechanicals

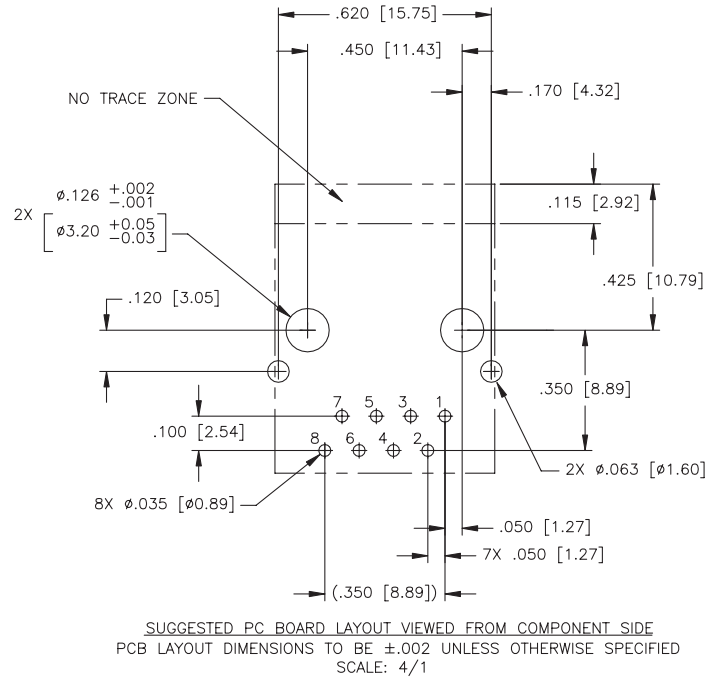
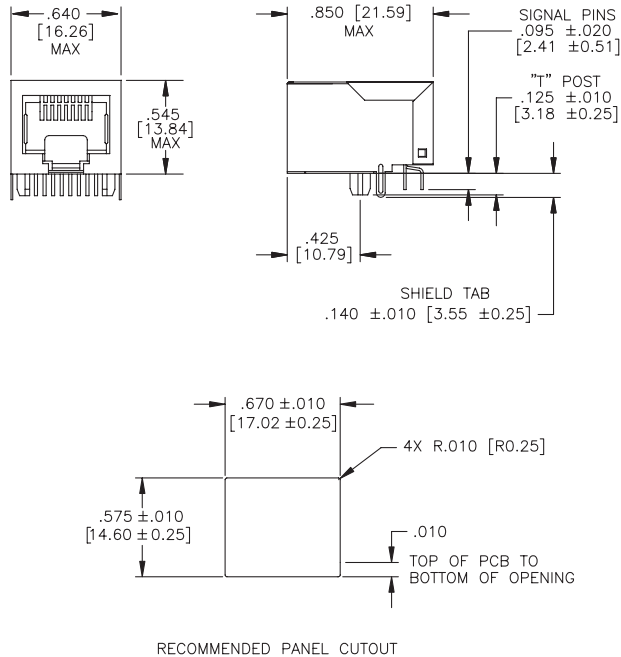


Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

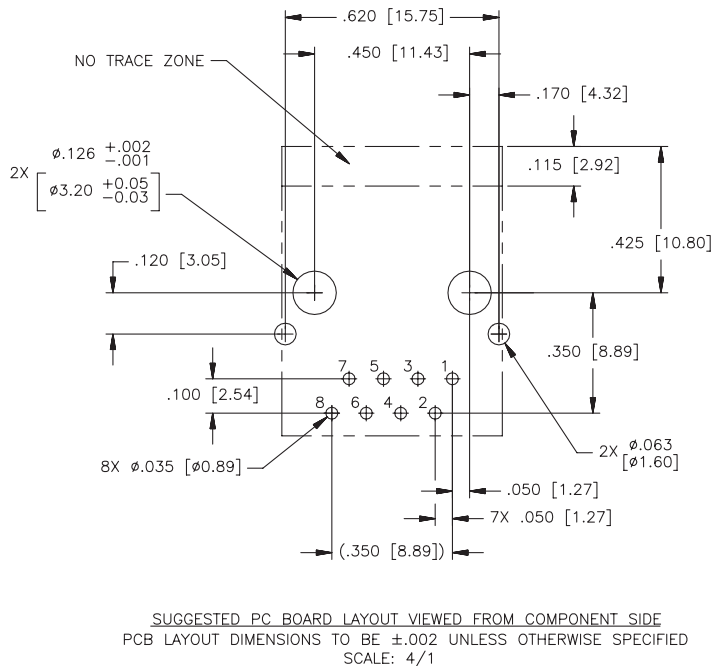
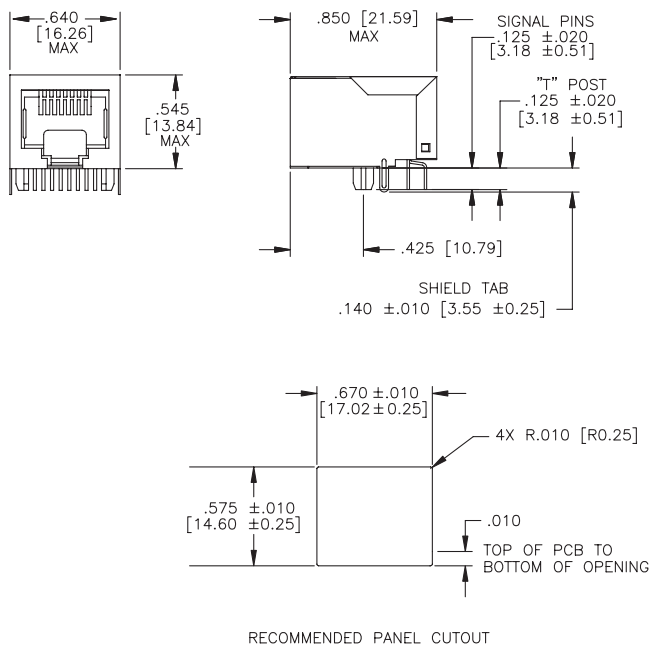
Unless otherwise specified, all tolerances are ±  $\frac{.010}{.25}$

### J0 Series Mechanicals

**C**



**D**

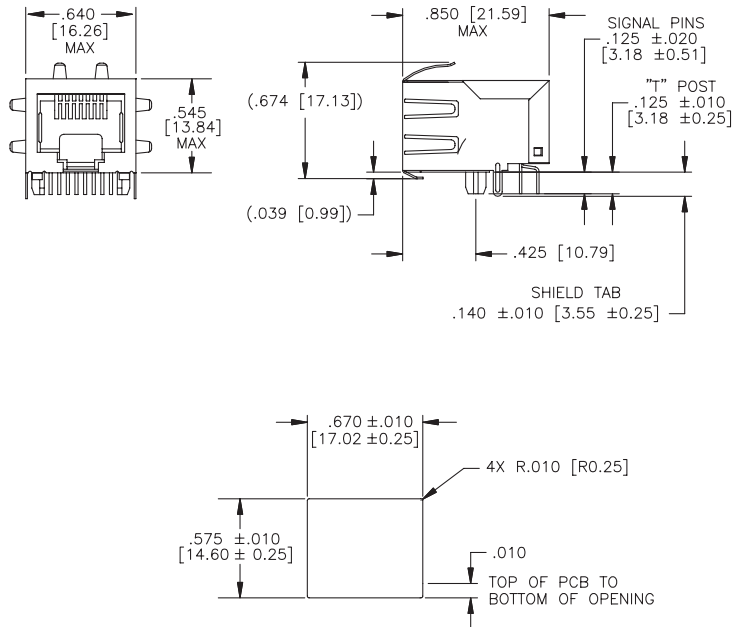


Dimensions: Inches  
mm

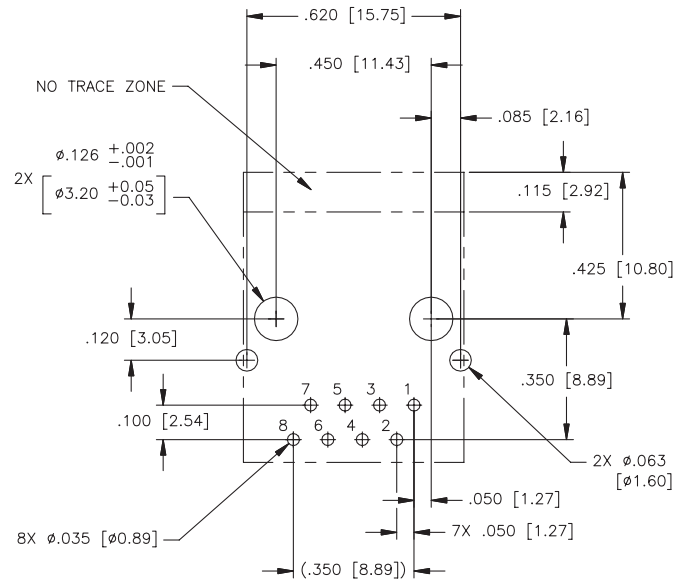
Unless otherwise specified, all tolerances are ± .010 / 0,25

### J0 Series Mechanicals

**E**

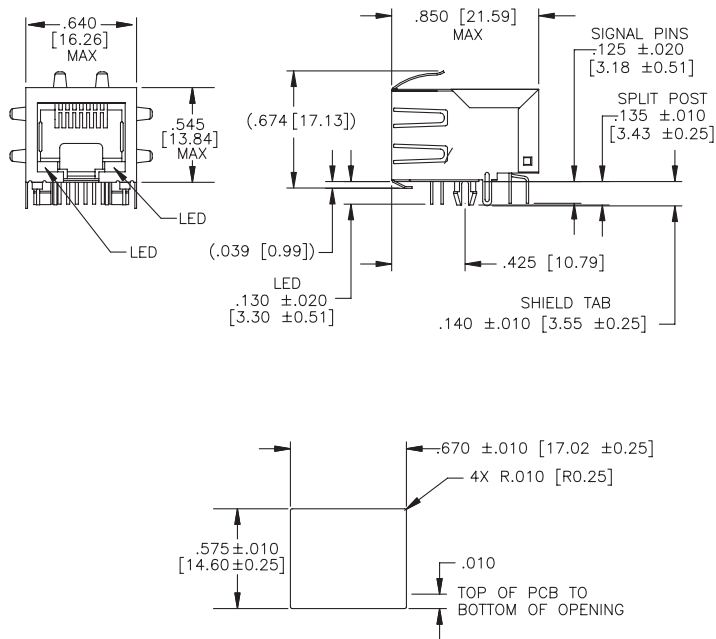


RECOMMENDED PANEL CUTOUT

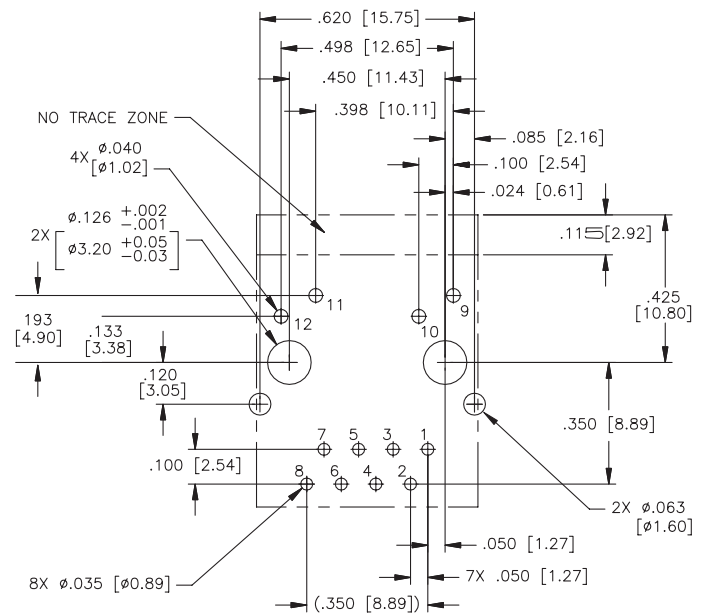


SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE  
PCB LAYOUT DIMENSIONS TO BE ±.002 UNLESS OTHERWISE SPECIFIED  
SCALE: 4/1

**F**



RECOMMENDED PANEL CUTOUT



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

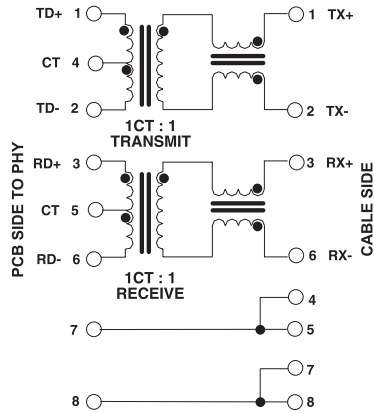
Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

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

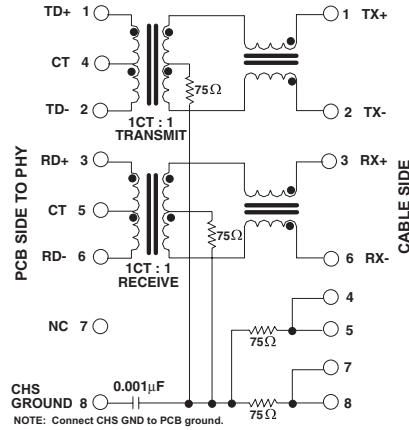


### J0 Series Electrical Schematics

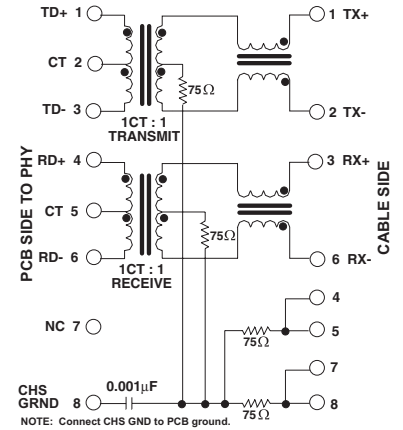
**J0006**



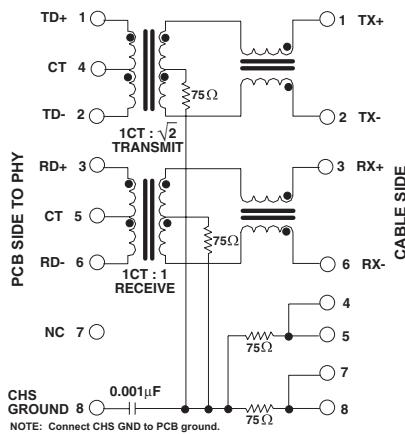
**J0011**



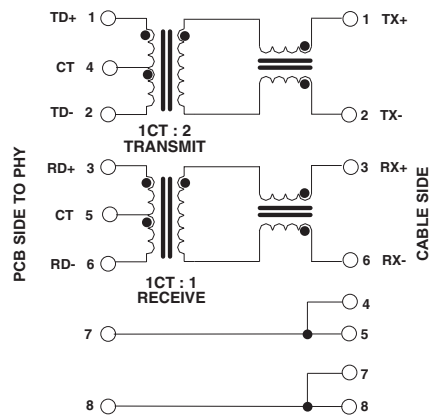
**J0012**



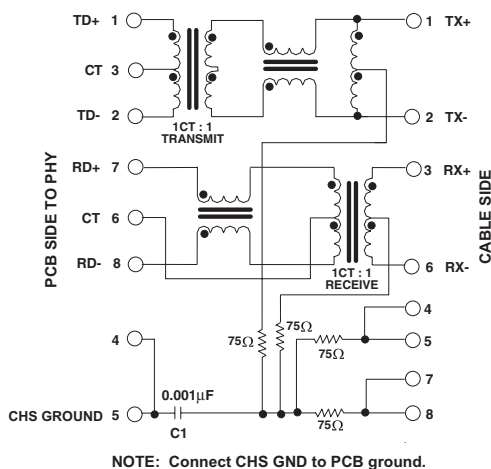
**J0018**



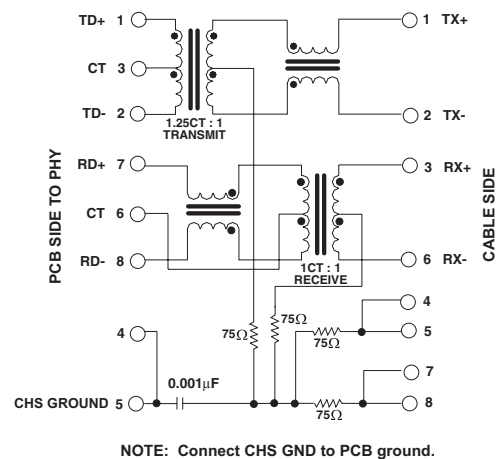
**J0024**



**J0026**

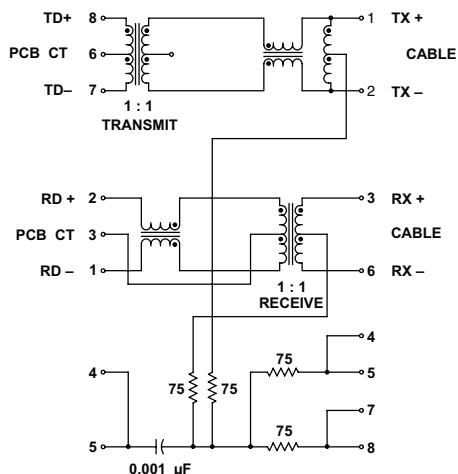


**J0033**

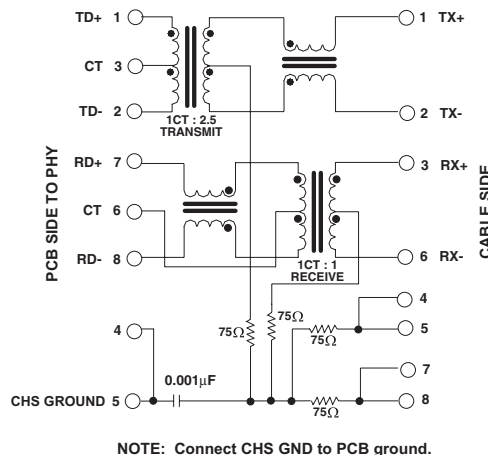


### J0 Series Electrical Schematics (continued)

**J0035**



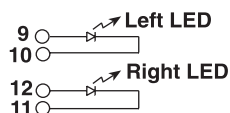
**J0073**



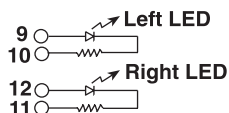
NOTE: Connect CHS GND to PCB ground.

### LED Configuration

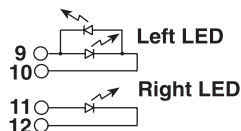
#### LED = "B & E" Specification (LEDs without internal resistors)



#### LED = "F" Specification (LEDs with internal resistors)



#### LED = "G" Specification (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 V |

\* 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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