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PULSEJACK™
1x1 Tab-DOWN RJ45

Pulse® A TECHNITROL COMPANY
www.pulseeng.com

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.

RoHS COMPLIANT



Features and Benefits:

- RoHS-5 peak wave solder temperature rating 235°C
- RoHS-6 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
- 350µH 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-5 Part No.	RoHS-6 Part No.	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 (Vrms)
		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	@60Hz 1 MIN
J0006D01B	J0006D01BNL	1CT:1	1CT:1	A	No	G/Y	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0006D21	J0006D21NL	1CT:1	1CT:1	E	YES	N/A	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0006D21B	J0006D21BNL	1CT:1	1CT:1	B	YES	G/Y	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0011D01	J0011D01NL	1CT:1	1CT:1	C	No	N/A	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0011D01B	J0011D01BNL	1CT:1	1CT:1	A	No	G/Y	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0011D21	J0011D21NL	1CT:1	1CT:1	E	YES	N/A	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0011D21B	J0011D21BNL	1CT:1	1CT:1	B	YES	G/Y	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0011D21E	J0011D21ENL	1CT:1	1CT:1	B	YES	G/G	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0012D21	J0012D21NL	1CT:1	1CT:1	E	YES	N/A	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0018D21	J0018D21NL	1CT:1.414	1CT:1	E	YES	N/A	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0018D21E	J0018D21ENL	1CT:1.414	1CT:1	B	YES	G/G	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0024D21	J0024D21NL	1CT:2	1CT:1	E	YES	N/A	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0024D21B	J0024D21BNL	1CT:2	1CT:1	B	YES	G/Y	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0026D01	J0026D01NL	1CT:1	1CT:1	D	No	N/A	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0026D01B	J0026D01BNL	1CT:1	1CT:1	A	No	G/Y	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0026D01E	J0026D01ENL	1CT:1	1CT:1	A	No	G/G	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0026D01F[2]	J0026D01FNL[2]	1CT:1	1CT:1	A	No	G/Y	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0026D21	J0026D21NL	1CT:1	1CT:1	E	YES	N/A	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0026D21B	J0026D21BNL	1CT:1	1CT:1	B	YES	G/Y	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0026D21E	J0026D21ENL	1CT:1	1CT:1	B	YES	G/G	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0026D21F[2]	J0026D21FNL[2]	1CT:1	1CT:1	B	YES	G/Y	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0026D21G[3]	J0026D21GNL[3]	1CT:1	1CT:1	B	YES	YG/G	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0033D21	J0033D21NL	1.25CT:1	1CT:1	E	YES	N/A	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0035D21B	J0035D21BNL	1CT:1	1CT:1	F	YES	G/Y	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500
J0073D01B	J0073D01BNL	1CT:2.5	1CT:1	A	No	G/Y	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500

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. **4. RoHS-5** - Product does not contain 5 out of the 6 banned substances specified in the RoHS directive. Product contains lead in applications considered as solders. **5. RoHS-6** - Product does not contain 5 out of the 6 banned substances specified in the RoHS directive. Some internal connections may contain lead in high temperature solder (solder alloys containing more than 85% lead).

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.

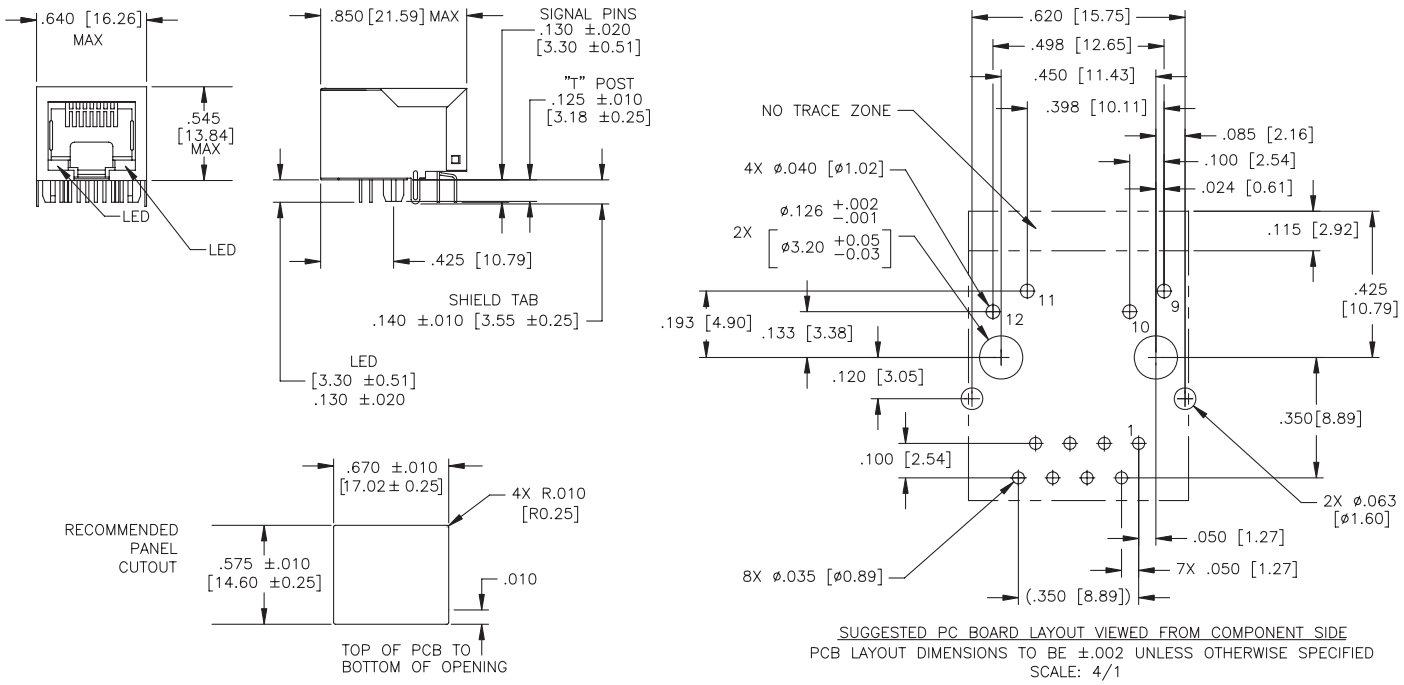
RJ45 Material Specification

Part Number	Shield		Contact			Housing		MSL[3] Rating
	Material	Finish	Material	Plating Area	Solder Area[2]	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. **2. RoHS-6** parts are tin matte finish over nickel. **3. MSL** = Moisture Sensitivity Level rating from 1 to 5 (highest rating = 1, lowest rating = 5)

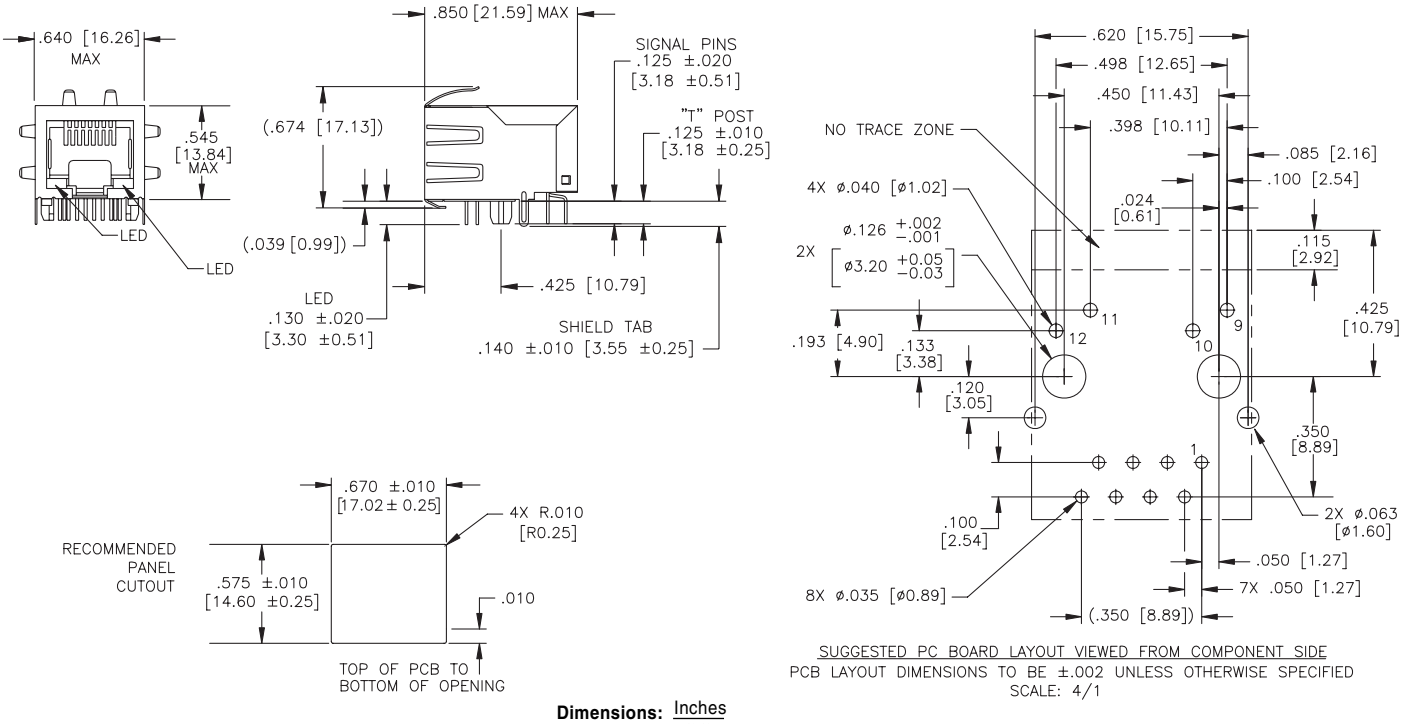
J0 Series Mechanicals

A



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

B



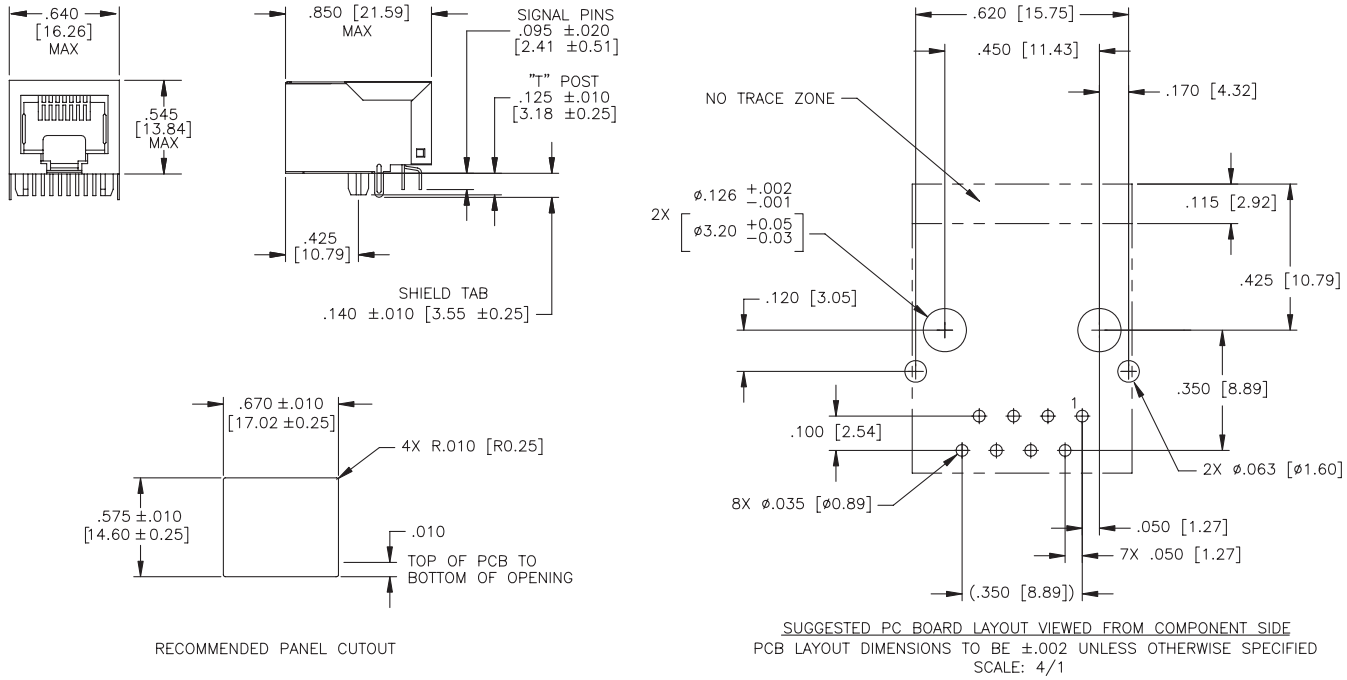
SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE
PCB LAYOUT DIMENSIONS TO BE ±.002 UNLESS OTHERWISE SPECIFIED
SCALE: 4/1

Dimensions: Inches / mm

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

J0 Series Mechanicals

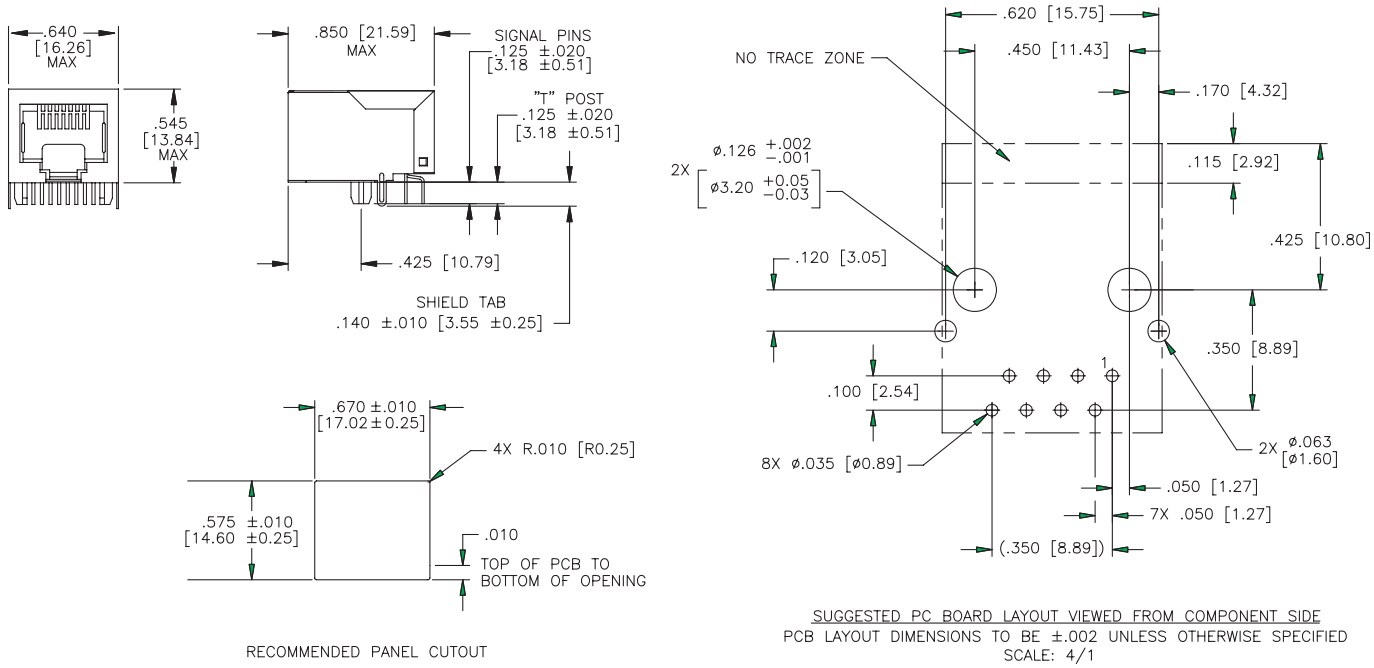
C



RECOMMENDED PANEL CUTOUT

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

D



RECOMMENDED PANEL CUTOUT

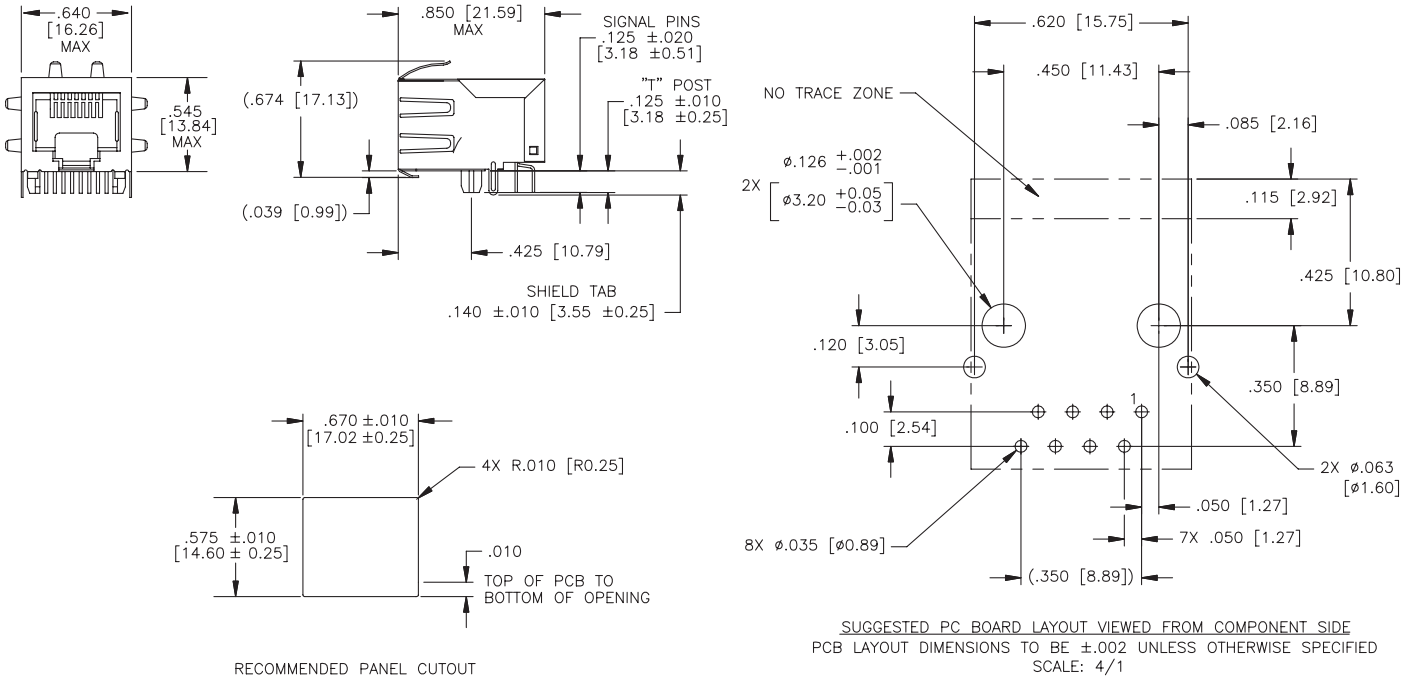
SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE
PCB LAYOUT DIMENSIONS TO BE ±.002 UNLESS OTHERWISE SPECIFIED
SCALE: 4/1

Dimensions: Inches / mm

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

J0 Series Mechanicals

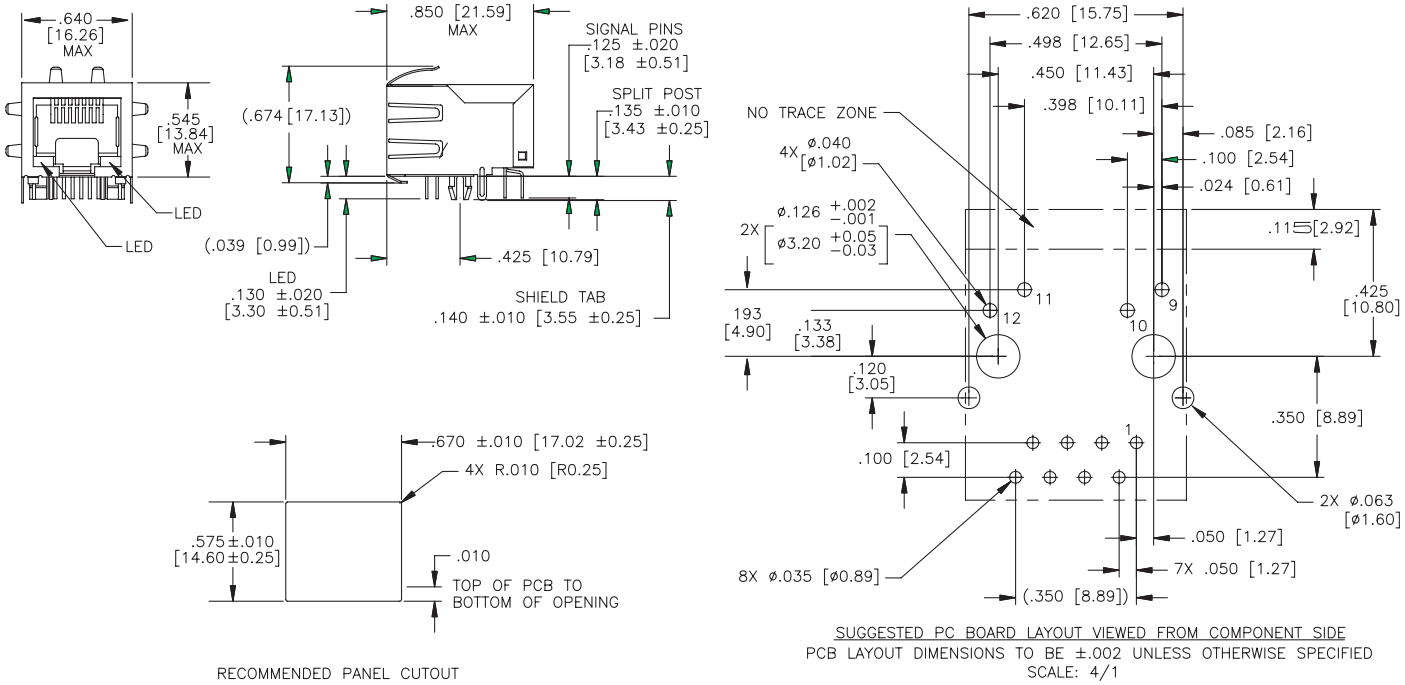
E



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

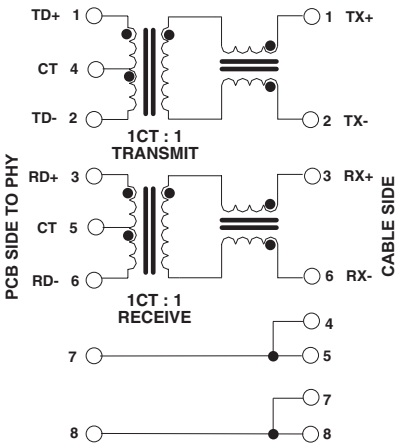
SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE
PCB LAYOUT DIMENSIONS TO BE ±.002 UNLESS OTHERWISE SPECIFIED
SCALE: 4/1

Dimensions: Inches / mm

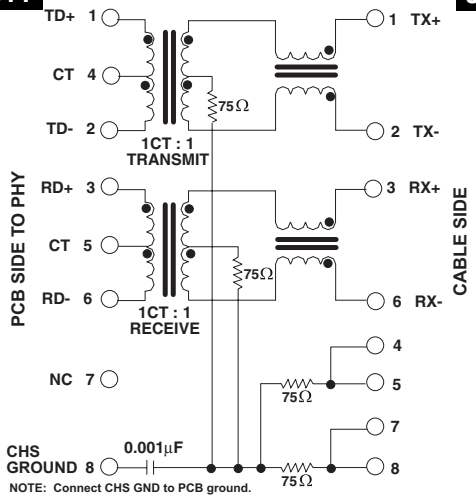
Unless otherwise specified, all tolerances are ± .010 / 0,25

J0 Series Electrical Schematics

J0006

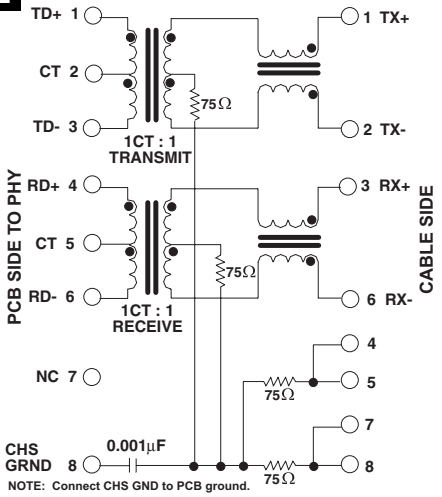


J0011



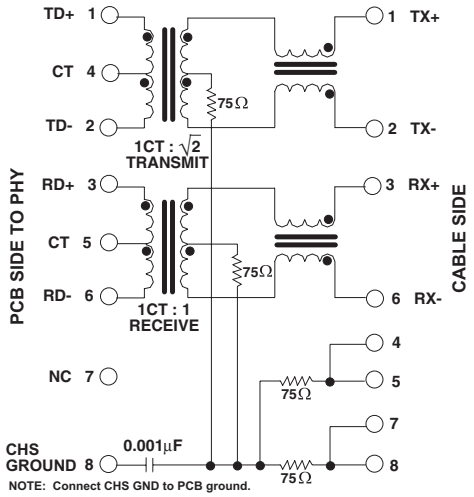
NOTE: Connect CHS GND to PCB ground.

J0012



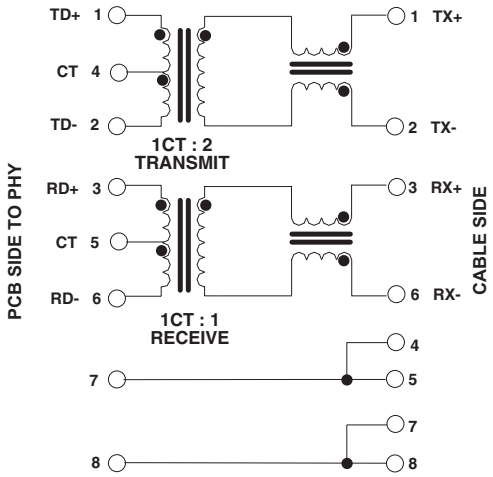
NOTE: Connect CHS GND to PCB ground.

J0018

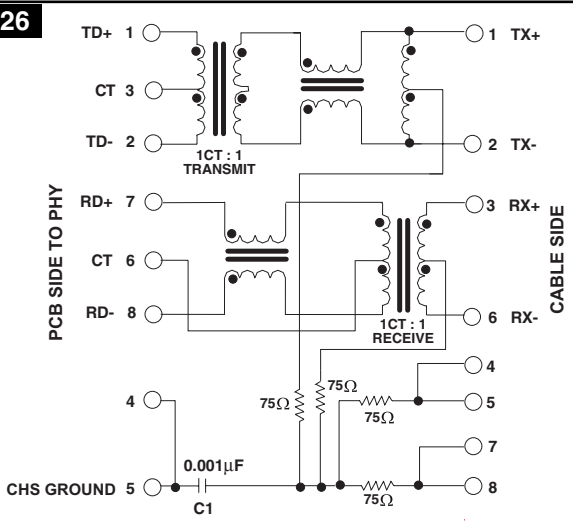


NOTE: Connect CHS GND to PCB ground.

J0024

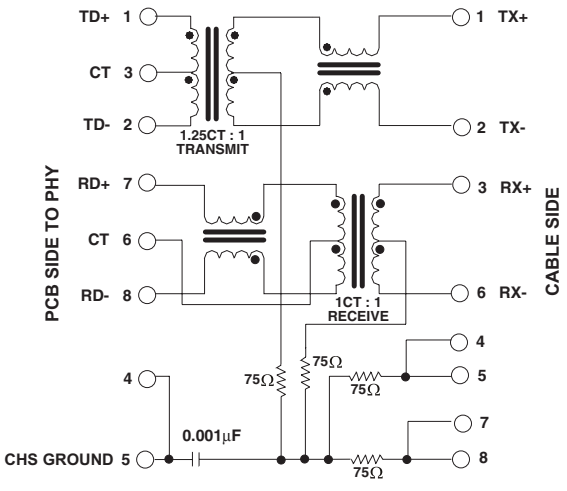


J0026



NOTE: Connect CHS GND to PCB ground.

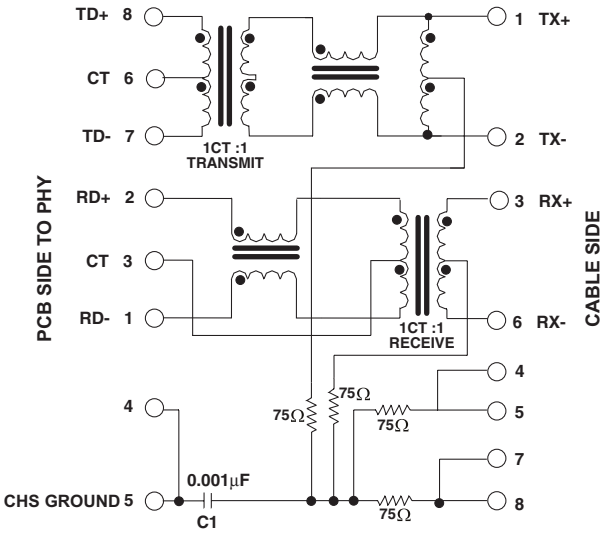
J0033



NOTE: Connect CHS GND to PCB ground.

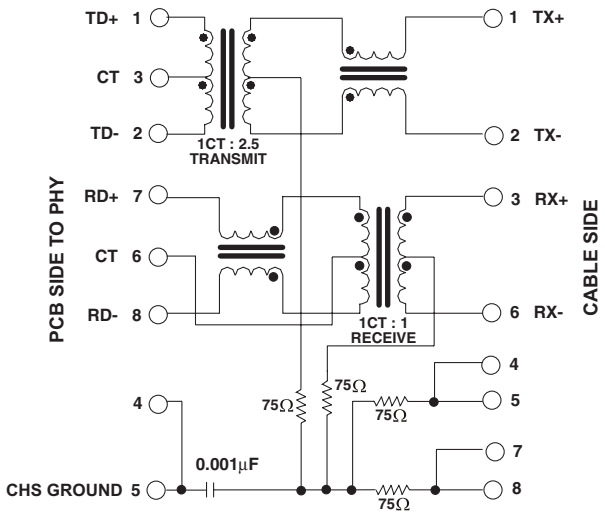
J0 Series Electrical Schematics *(continued)*

J0035



NOTE: Connect CHS GND to PCB ground.

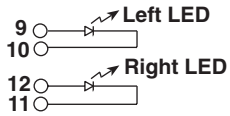
J0073



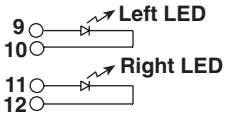
NOTE: Connect CHS GND to PCB ground.

LED Configuration

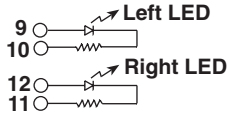
LED = "B & E" Specification
(LEDs without internal resistors)



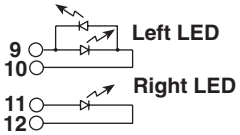
LED = "M" Specification
(LEDs without internal resistors)



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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