

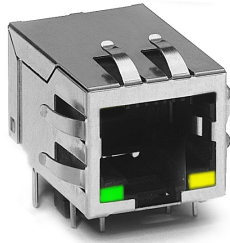


**THE DATASHEET OF
J0018D21NL**



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)			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	1 MIN			
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			
JO011D21E1N1L	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			
JO018D21E1N1L	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			
JO026D01E1N1L	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			
JO026D21E1N1L	1CT:1	1CT:1	B	YES	G/G	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	2250			
JO026D21F1N1L ²	1CT:1	1CT:1	B	YES	G/Y	-1	-20	-16	-12	-10	-40	-35	-30	-30	-20	2250			
JO026D21G1N1L 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.

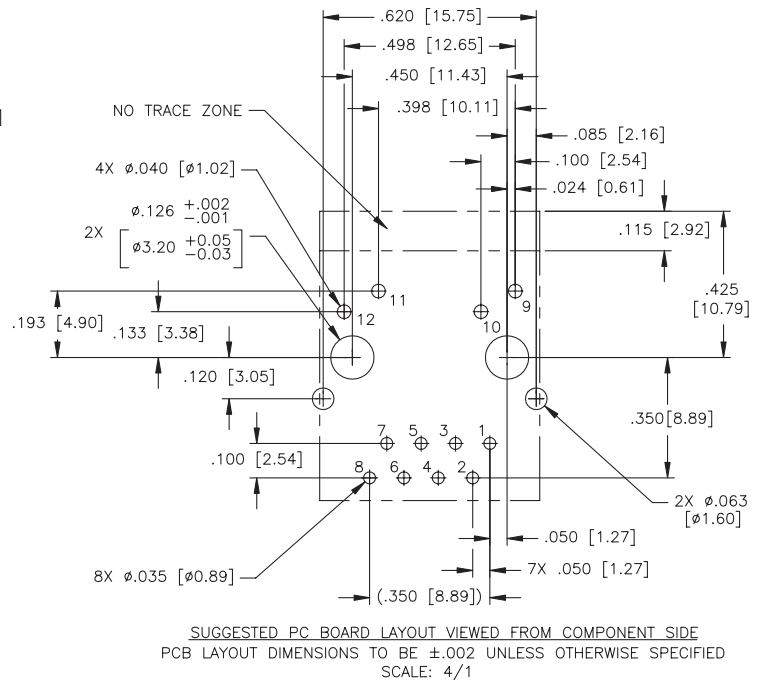
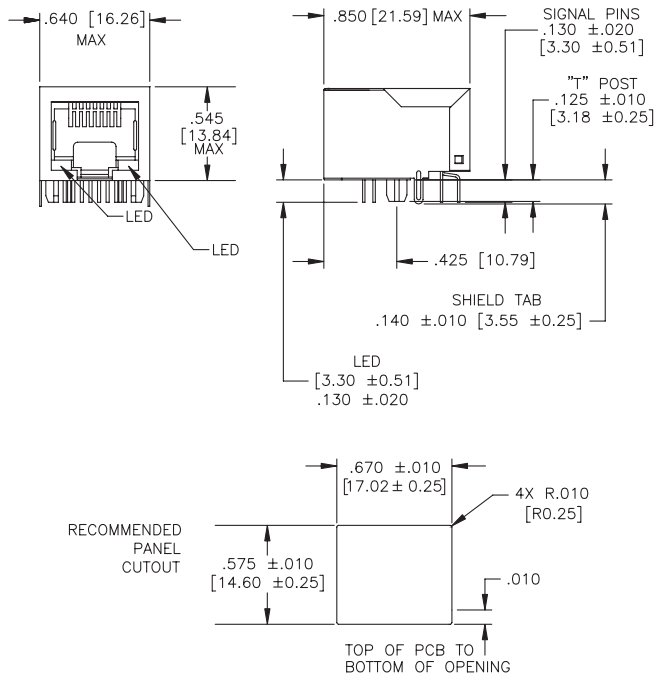
RJ45 Material Specification

Part Number	Shield		Material	Contact		Housing		MSL ³ Rating
	Material	Finish		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

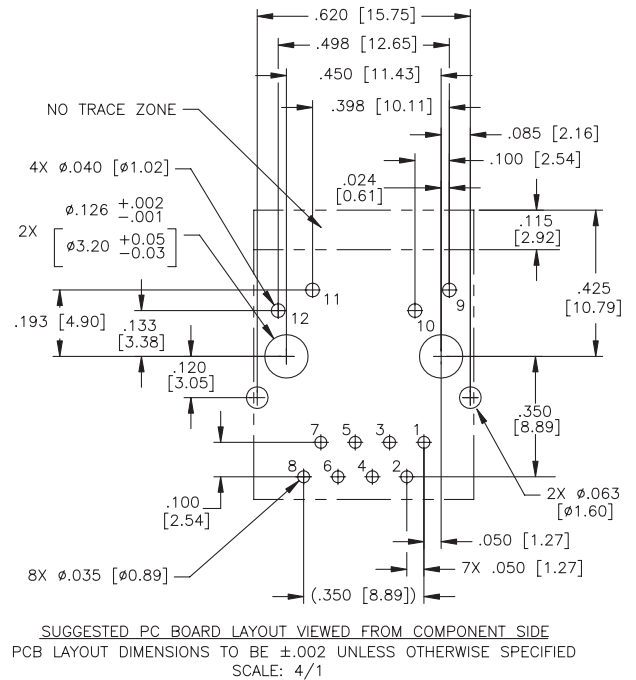
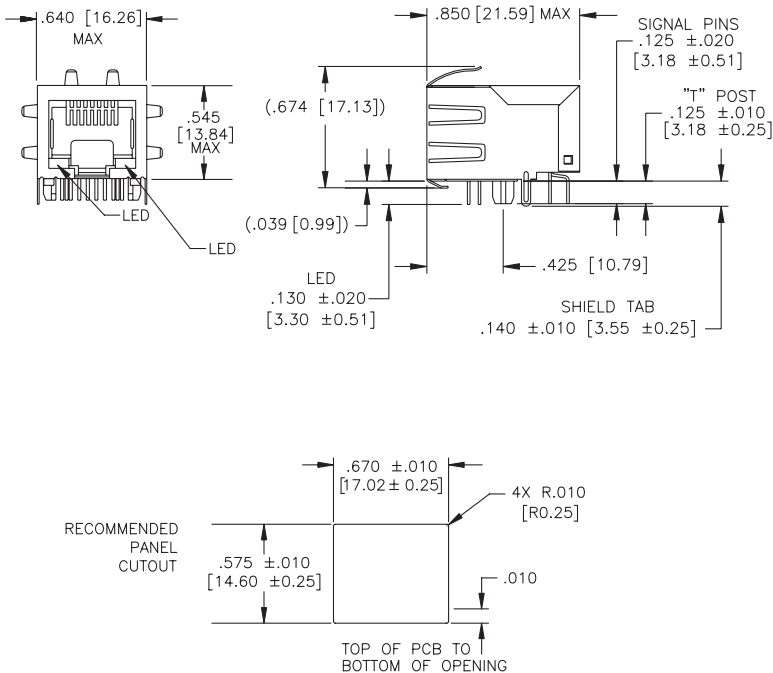
Notes: 1. Connector dimensions comply with FCC dimension requirements. 2. RoHS parts are tin matte finish over nickel. 3. MSL = Moisture Sensitivity Level rating from 1 to 5 (highest = 1, lowest = 5)

J0 Series Mechanicals

A



B

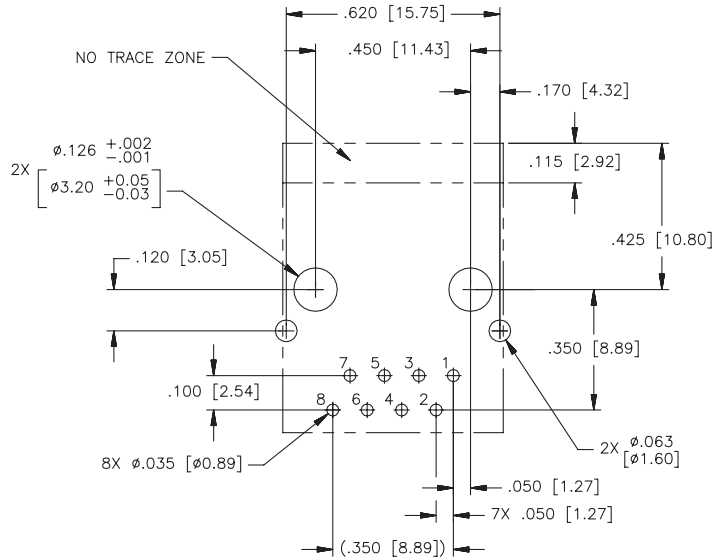
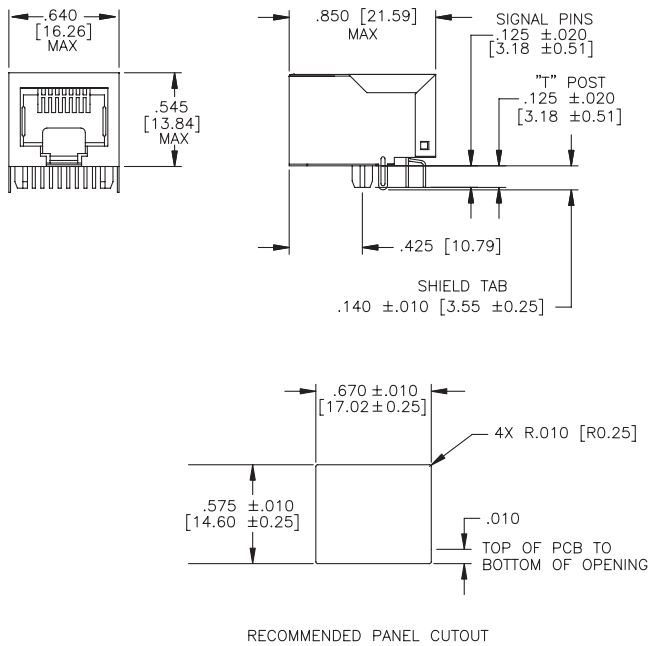


Dimensions: $\frac{\text{Inches}}{\text{mm}}$

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

J0 Series Mechanicals (continued)

C

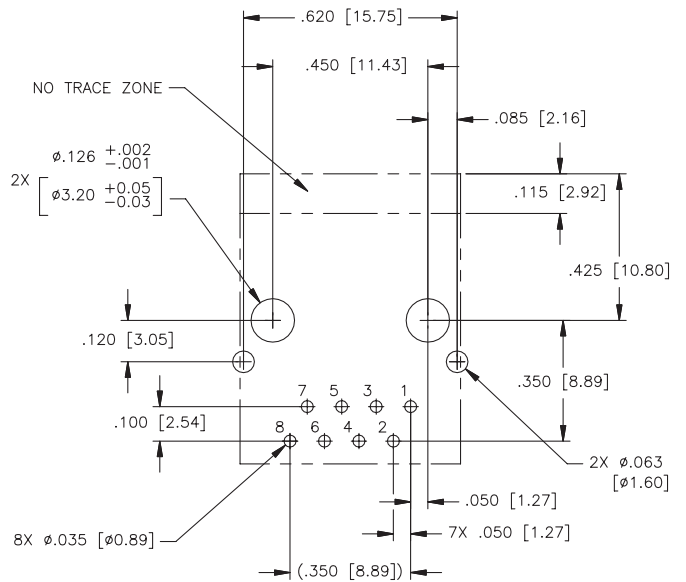
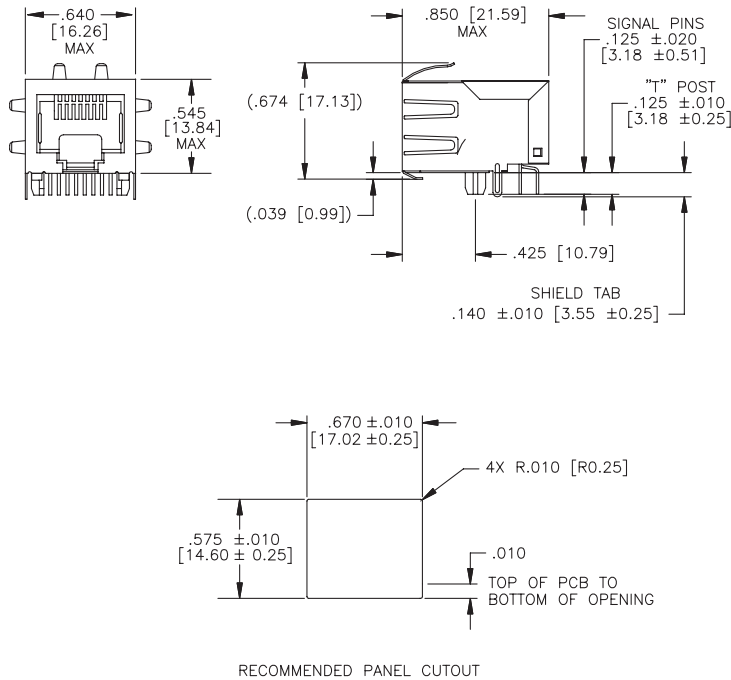


SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE
PCB LAYOUT DIMENSIONS TO BE $\pm .002$ UNLESS OTHERWISE SPECIFIED
SCALE: 4/1

Dimensions: Inches
mm

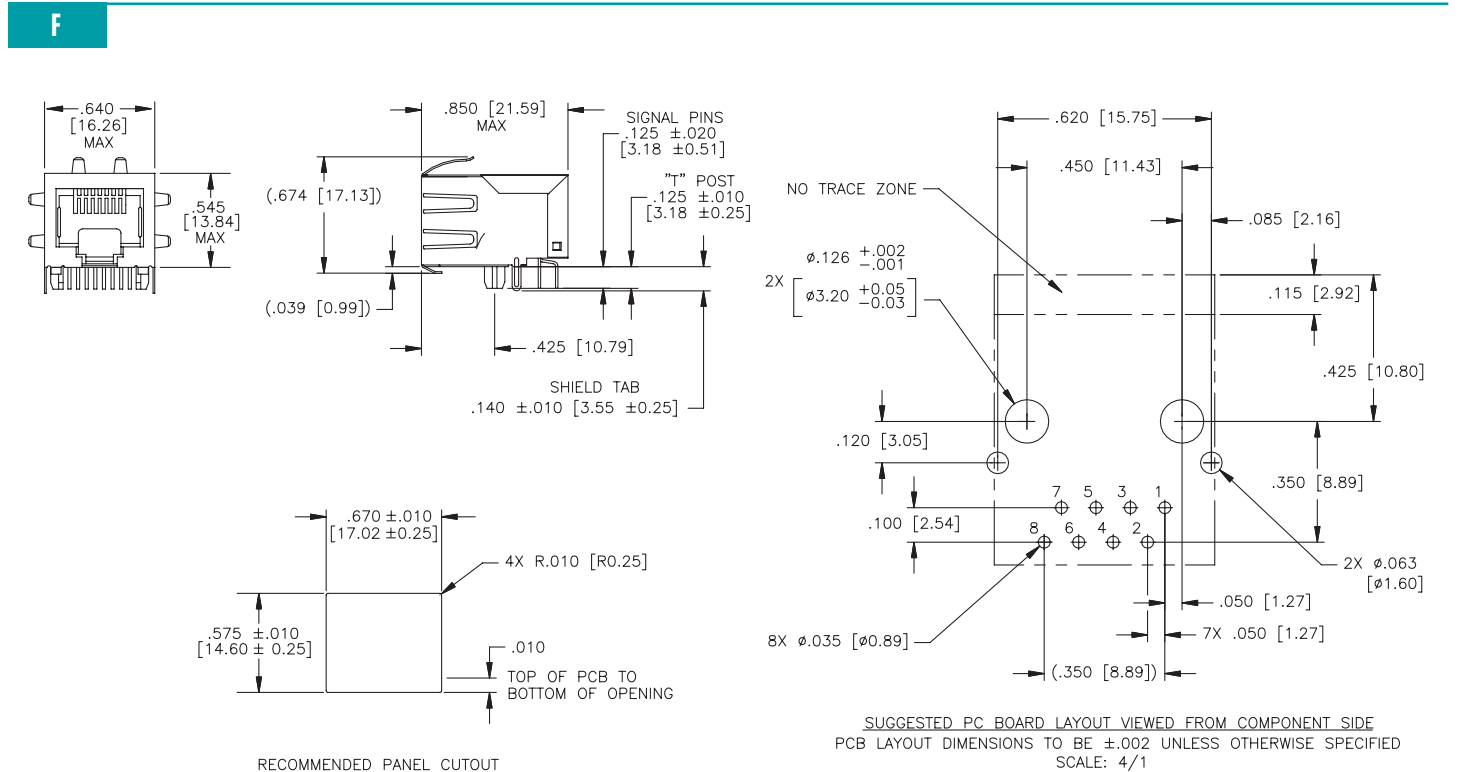
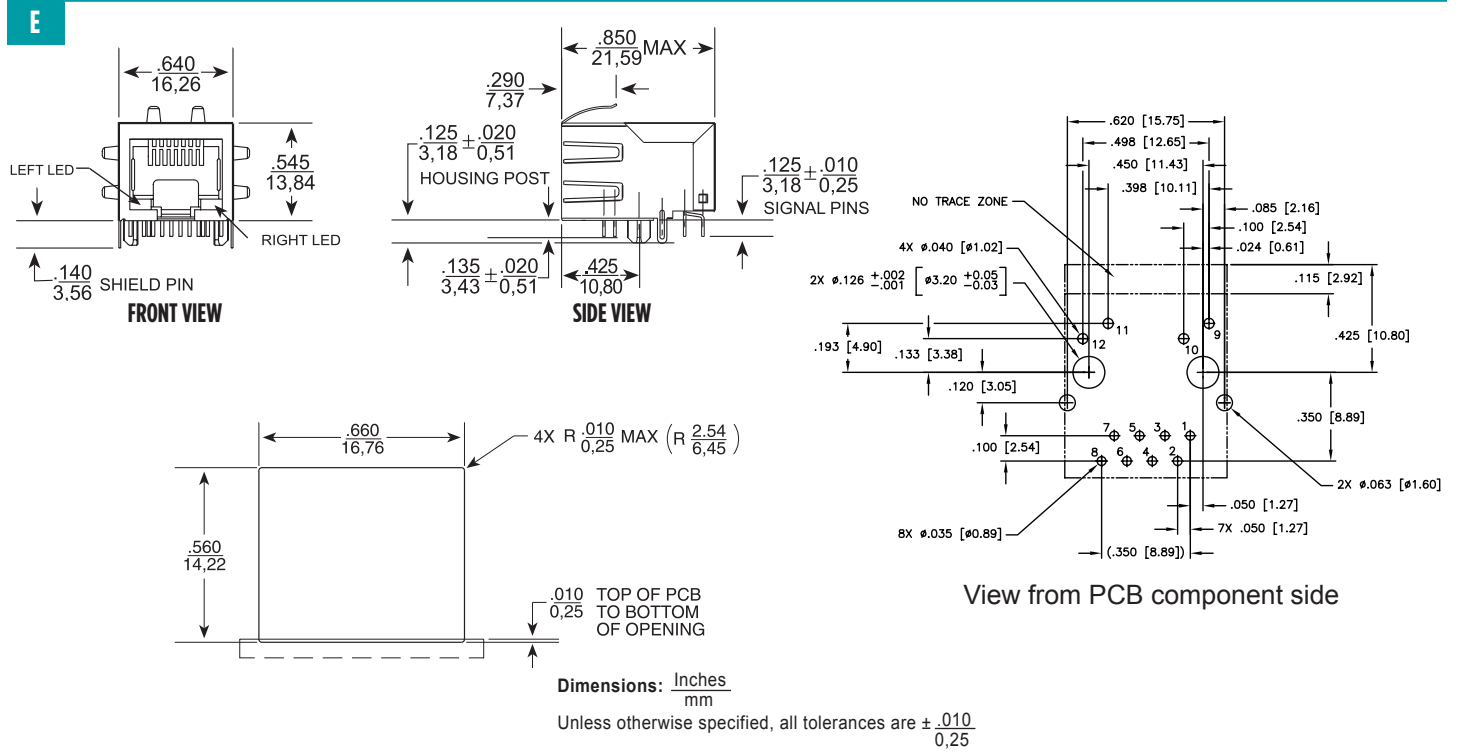
Unless otherwise specified, all tolerances are $\pm .010$
 0.25

D



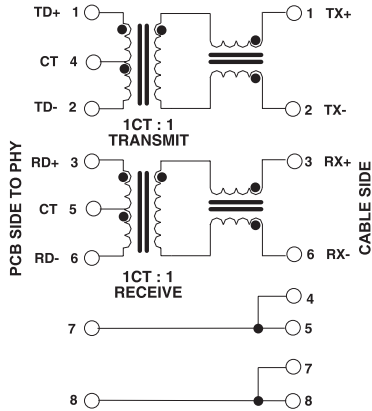
SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE
PCB LAYOUT DIMENSIONS TO BE $\pm .002$ UNLESS OTHERWISE SPECIFIED
SCALE: 4/1

J0 Series Mechanicals (continued)

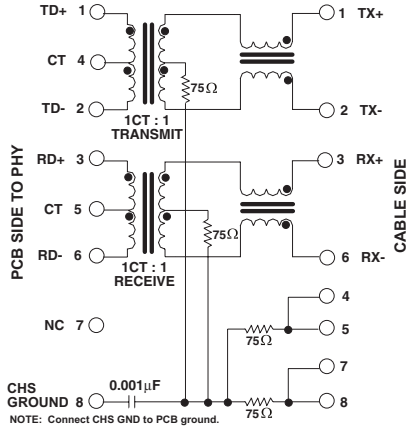


J0 Series Electrical Schematics

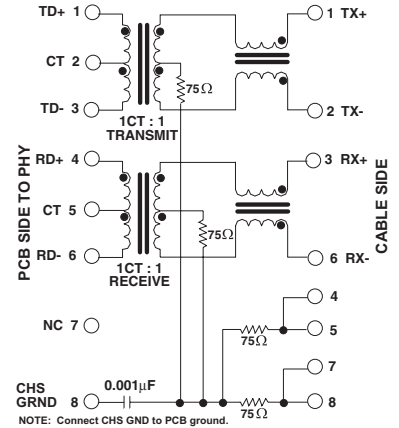
J0006



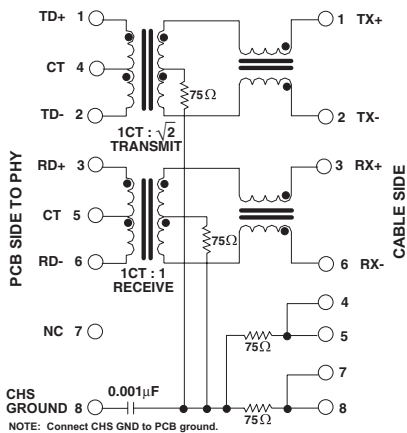
J0011/J00-0014NL/45NL/61NL/65NL



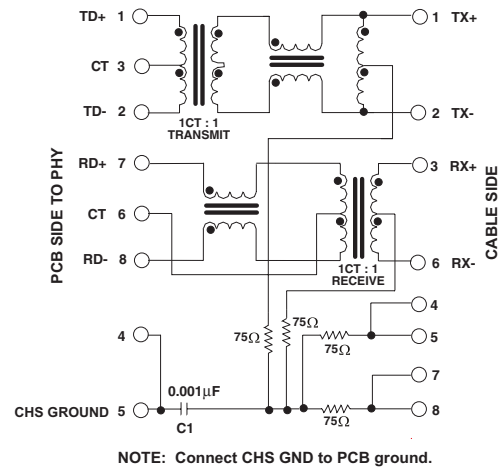
J0012



J0018

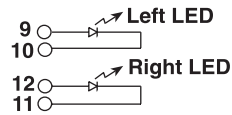


J0026

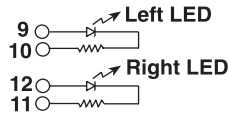


LED Configuration

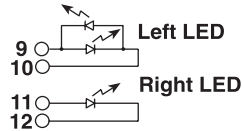
LEDs without internal resistors



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).

For More Information:

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