

PULSEJACK™

2XN RJ45 Connector

Description:

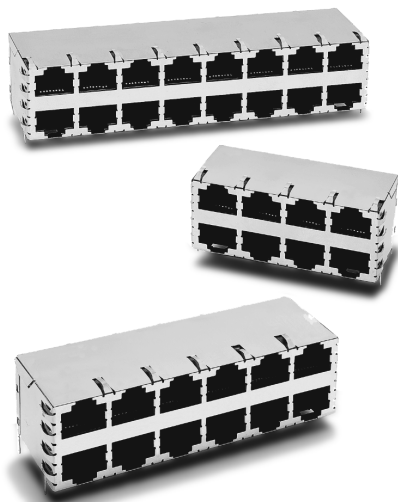
10/100 Base-TX RJ45 2XN Tab-UP with or without LEDs (J2 series) integrated magnetics connector (ICM), designed to support applications, such as Hub and Switches and Power over Ethernet enabled switch/hub systems.

Features and Benefits:

- ⦿ RoHS peak wave solder temperature rating 260°C
- ⦿ 2XN RJ45 with internal magnetics
- ⦿ Available with or without LEDs
- ⦿ **Power over Ethernet (PoE) Enabled. Compatible to IEEE 802.3af standard**
- ⦿ Suitable for CAT 5 & 6 Fast Ethernet Cable or better UTP
- ⦿ Internal magnetics are 100% electrically tested for HI-POT and functionality

Electrical Performance Summary:

- ⦿ Internal magnetics options available
- ⦿ **Meets or exceeds IEEE 802.3i/u/af standard**
- ⦿ 350µH minimum OCL with 8mA bias current
- ⦿ High performance for maximum EMI suppression
- ⦿ **Minimum 1500 Vrms isolation per IEEE 802.3i/u/af requirement**



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

RoHS Compliant	No. of Ports	Turns ² Ratios		LEDs ³	PoE ⁴ Enabled	Insertion Loss (dB TYP)	Return Loss (dB TYP) 100Ω ±15Ω					Crosstalk (dB TYP)			Common Mode Rejection (dB TYP)	
		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
J2039H3 (A,B,C)NL	8,12,16	1CT:1CT	1CT:1CT	None	No	-1	-20	-16	-12	-12	-12	-40	-35	-30	-30	-20
J2042H3 (A,B,C)NL	8,12,16	1CT:1CT	1CT:1CT	None	No	-1	-20	-16	-12	-12	-12	-40	-35	-30	-30	-20
J2045H3 (A,B,C)NL	8,12,16	1CT:1CT	1CT:1CT	None	No	-1	-20	-16	-12	-12	-12	-40	-35	-30	-30	-20
J20-0013NL	4	1CT:1CT	1CT:1CT	G/Y, G/Y	No	-1	-20	-16	-12	-12	-12	-40	-35	-30	-30	-20
J20-0014NL	8	1CT:1CT	1CT:1CT	G/Y, G/Y	No	-1	-20	-16	-12	-12	-12	-40	-35	-30	-30	-20
J20-0015NL	12	1CT:1CT	1CT:1CT	G/Y, G/Y	No	-1	-20	-16	-12	-12	-12	-40	-35	-30	-30	-20
J20-0016NL	16	1CT:1CT	1CT:1CT	G/Y, G/Y	No	-1	-20	-16	-12	-12	-12	-40	-35	-30	-30	-20
J20-0017NL	8	1CT:1CT	1CT:1CT	None	Yes	-1	-20	-16	-12	-12	-12	-40	-35	-30	-30	-20
J20-0019NL	12	1CT:1CT	1CT:1CT	None	Yes	-1	-20	-16	-12	-12	-12	-40	-35	-30	-30	-20

Notes:

- Part numbers code (A,B,C, D): A = 2x4, B = 2x6, C = 2x8, D = 2x2
- Both transmit and receive channels meet IEEE 802.3 specifications.
- Bi-color LEDs: G = green; Y = yellow for each port
- PoE = Power over Ethernet Compatible product, compliant to IEEE 802.3af standard, providing minimum 1.5Kv isolation
- Contact Pulse for PoE enabled product with LEDs.

RJ45 Durability Testing Rating

Part Number	Mating Force (MAX)	Unmating Force (MAX)	Durability	Plug to Jack Retention (MIN)
J2 Series	5lbs./2.268kgs.	5lbs./2.268kgs.	750 Insertions	20lbs./9.072kgs.

RJ45 Material Specification

Part Number	Shield		Contact			Housing	
	Material	Finish	Material	Plating Area	Solder Area	Material	Specification
J2 Series	Brass	10-20m inches Nickel over 10-20m inches Brass	Phosphor Bronze	Nickel underplating and selective gold plating 30µ inches	Tin matte finish	Thermoplastic	UL 94 V-0

Notes: 1. All connector part numbers starting with the series prefix J2 comply to the above limits. 2. Connector dimensions comply with FCC dimension requirements.

USA 858 674 8100 • Germany 49 7032 7806 0 • Singapore 65 6287 8998 • Shanghai 86 21 62787060 • China 86 755 33966678 • Taiwan 886 3 4643715

2 X 4

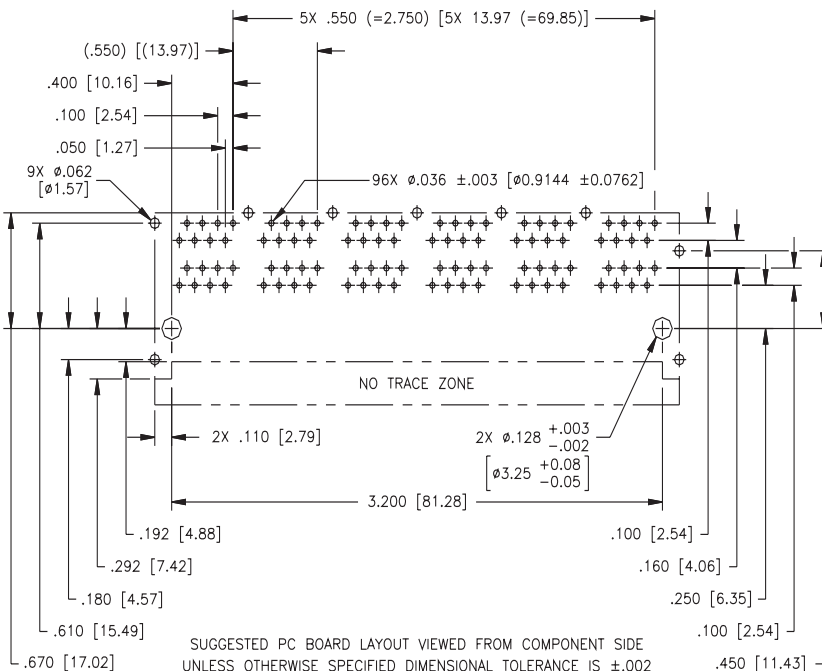
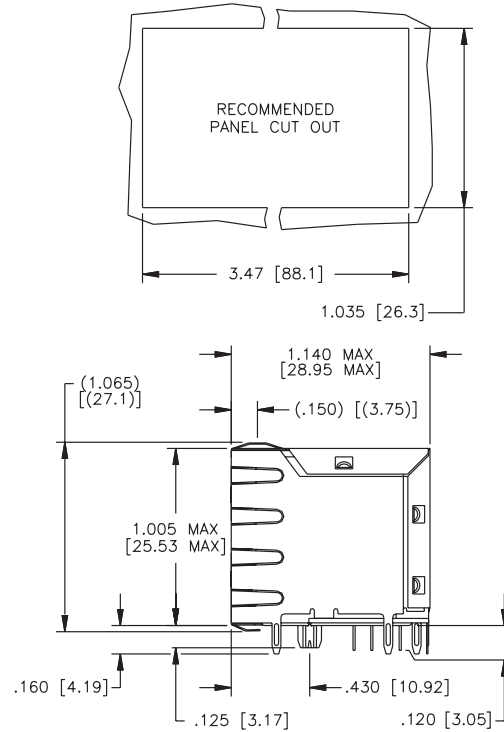
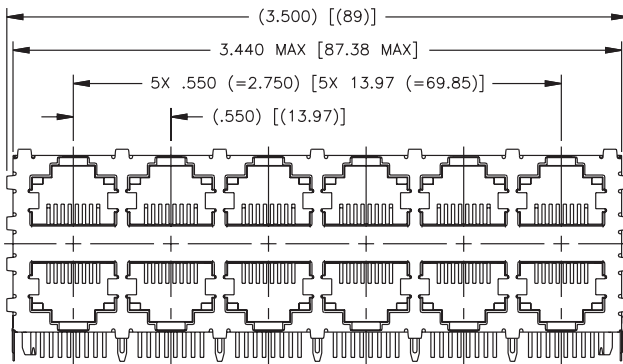
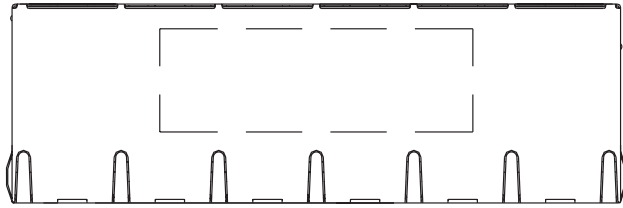


Dimensions: $\frac{\text{Inches}}{\text{mm}}$

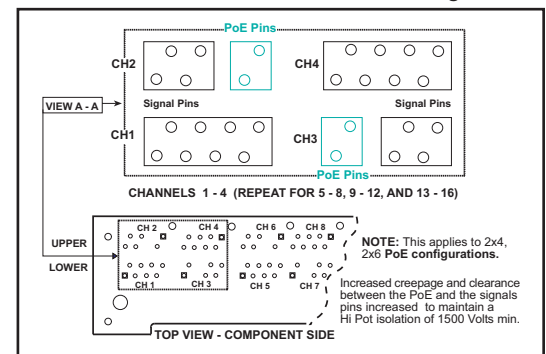
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0.25}$

J2 Series (No LEDs) Mechanicals (available PoE Enabled)

2 X 6



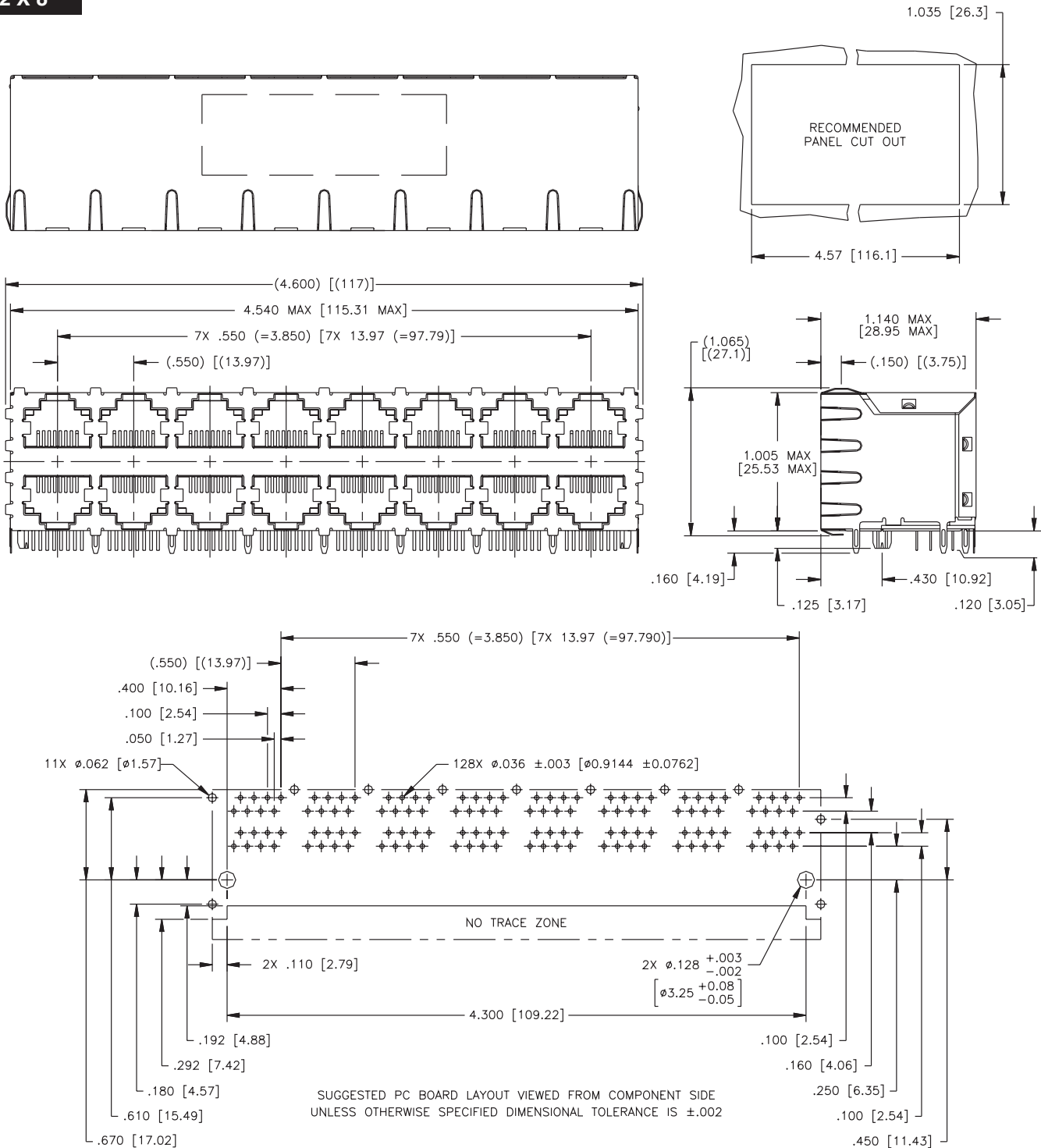
PoE Enabled Connector Pin Out Assignment



Dimensions: Inches
mm
Unless otherwise specified,
all tolerances are ± .010
0,25

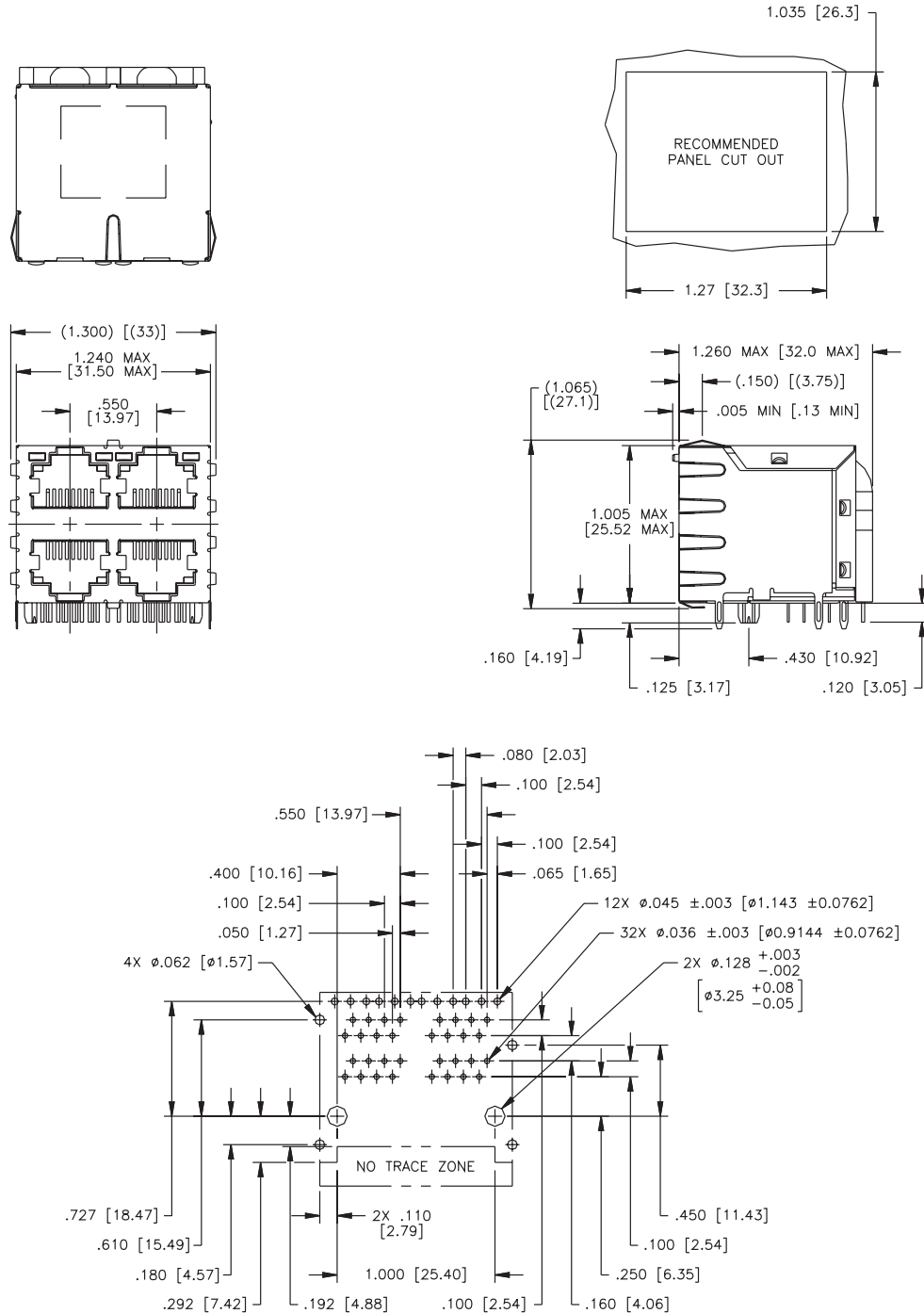
J2 Series (No LEDs) Mechanicals (not PoE Enabled)

2 X 8



J2 Series (With LEDs) Mechanicals (not PoE Enabled)

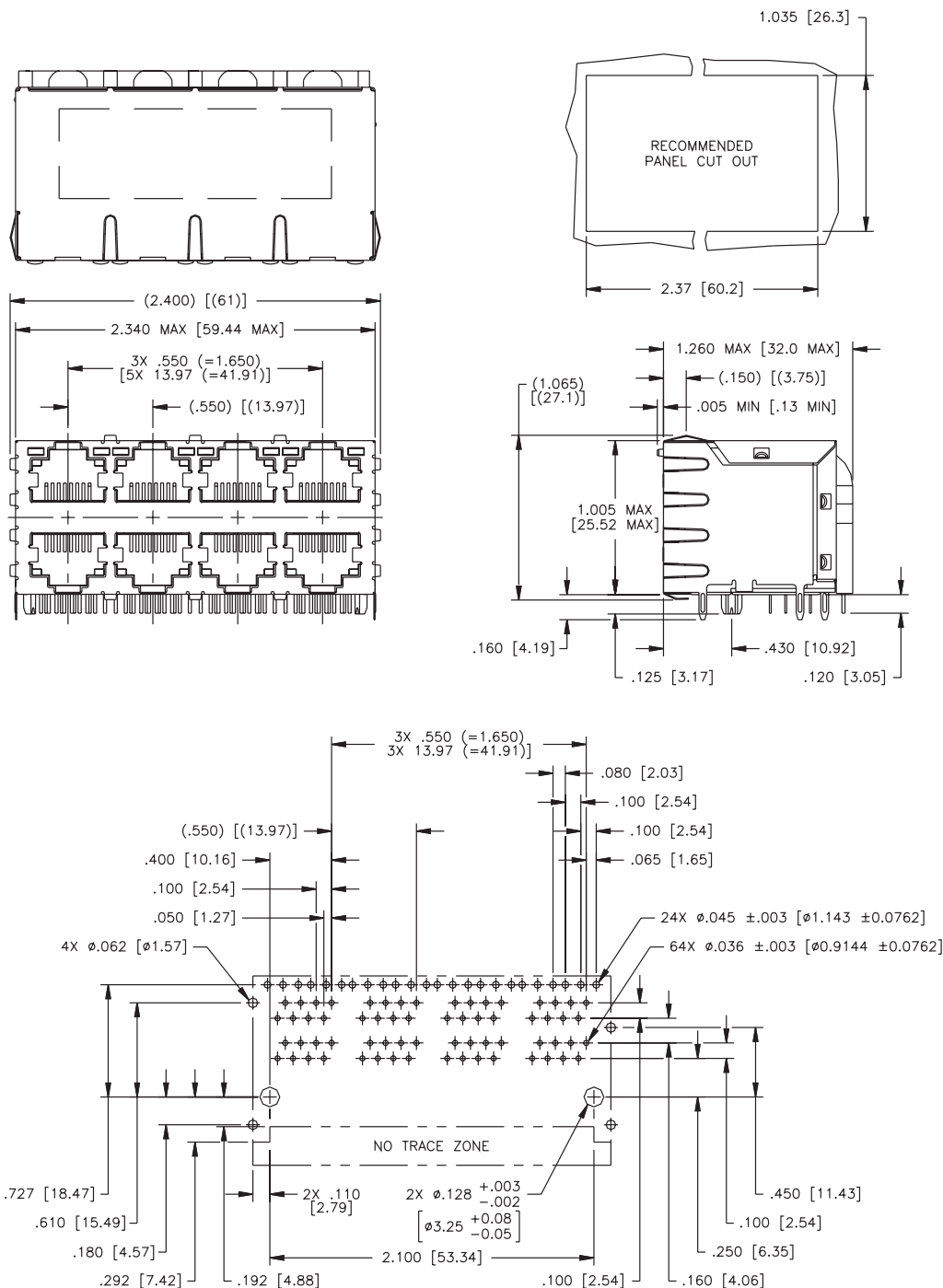
2 X 2



SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE
UNLESS OTHERWISE SPECIFIED DIMENSIONAL TOLERANCE IS ± 0.002

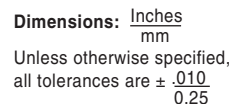
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
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2 X 4



Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0.25}$

2 X 6



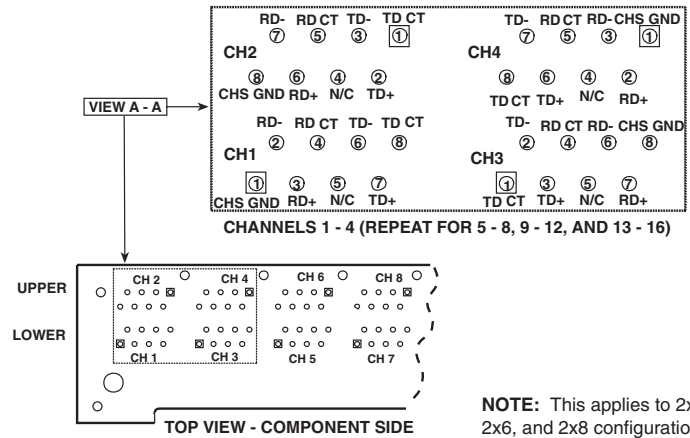
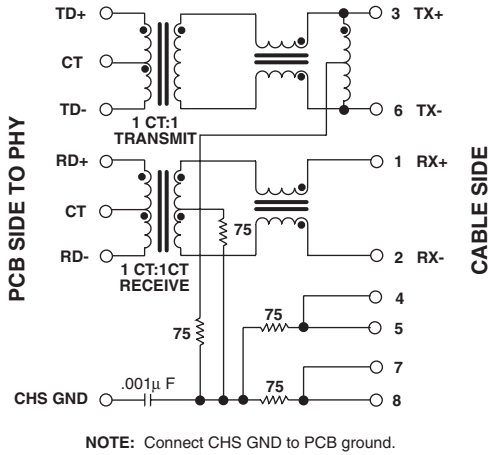
2 X 8



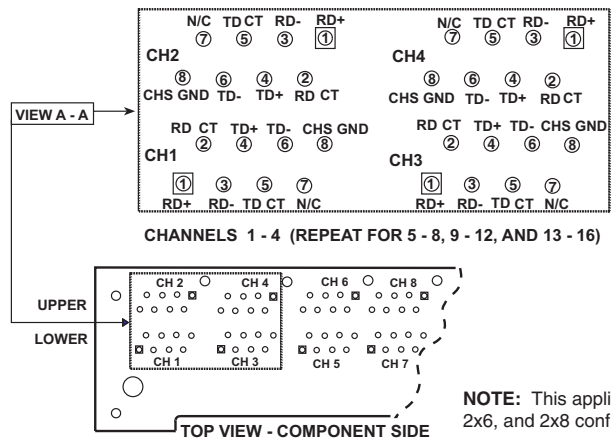
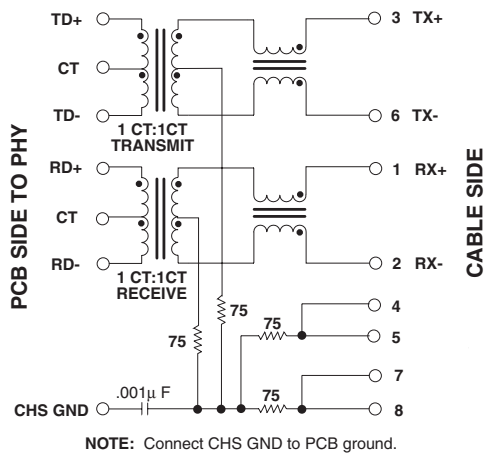
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J2 Series (No LEDs) Schematics (not PoE Enabled)

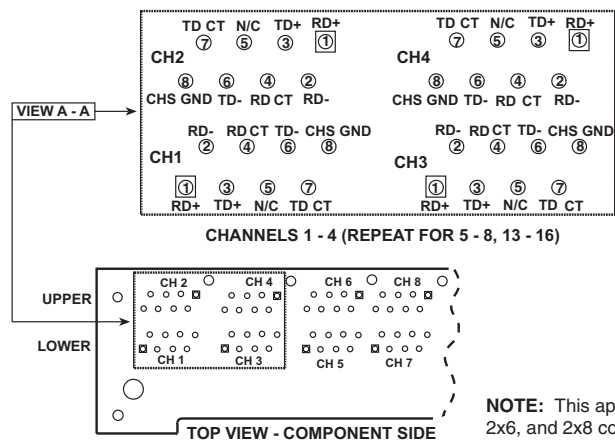
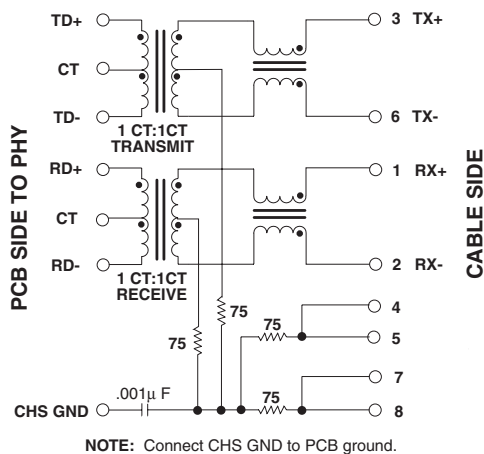
J2039



J2042



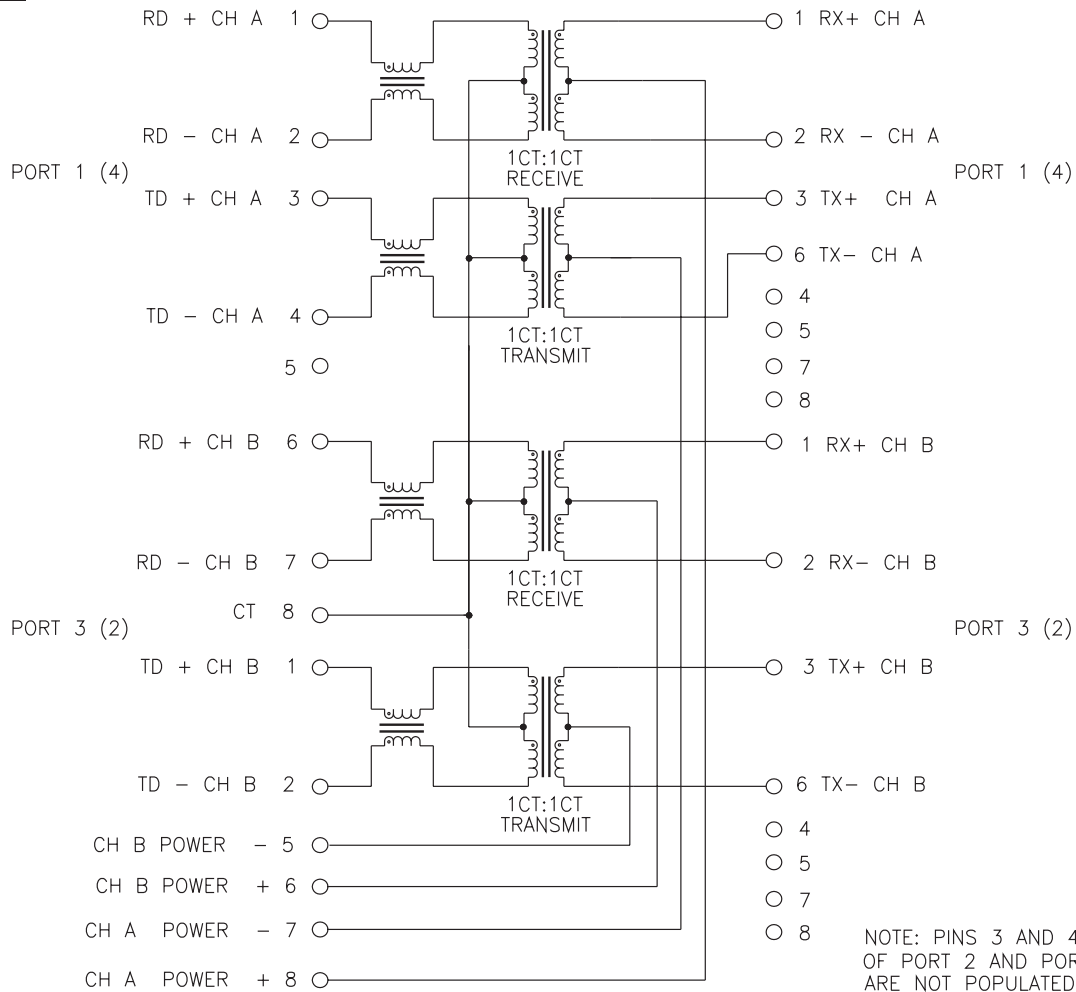
J2045



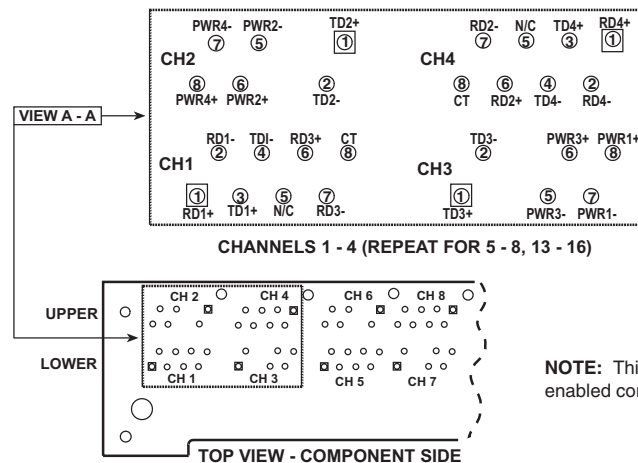
J2 Series (No LEDs/PoE Enabled) Schematics

J20-0017/19NL

PCB SIDE

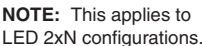


CABLE SIDE



NOTE: This applies to 2xN PoE enabled configurations.

J20-0013/14/15/16NL



1 Green
2 Common
3 Yellow

1. LED intensity/wavelength measured with Photo Research PR-650 Colormeter
2. With a forward current of 20 mA

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J401.D (10/09)