

PULSEJACK™

2XN RJ45 Connector



Description:

10/100 Base-TX RJ45 2XN Tab-UP with or without LEDs 8-pin (J2 series) integrated magnetics connector (ICM), designed to support applications, such as Hub and Switches.



Features and Benefits:

- ⊕ 2XN RJ45 with internal magnetics
- ⊕ Available with or without LEDs
- ⊕ 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 802.3 standard for 100Base-T
- ⊕ 350 μ H minimum OCL with 8 mA bias current
- ⊕ High performance for maximum EMI suppression
- ⊕ Minimum 1500 Vrms isolation per IEEE 802.3 requirement

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

Part Number	No. of Ports	Turns ^{1,2} Ratios		LEDs ³	Insertion Loss (dB TYP)	Return Loss (dB TYP)					Crosstalk (dB TYP)			Common Mode Rejection (dB TYP)	
		TX	RX			L/R	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
J2039H3 (A,B,C)	8,12,16	1CT:1CT	1CT:1CT	N/A	-1	-20	-16	-12	-12	-40	-35	-30	-30	-20	
J2042H3 (A,B,C)	8,12,16	1CT:1CT	1CT:1CT	N/A	-1	-20	-16	-12	-12	-40	-35	-30	-30	-20	
J2045H3 (A,B,C)	8,12,16	1CT:1CT	1CT:1CT	N/A	-1	-20	-16	-12	-12	-40	-35	-30	-30	-20	
J2045J329E	4	1CT:1CT	1CT:1CT	G Y	-1	-20	-16	-12	-12	-40	-35	-30	-30	-20	
J2045J349E	8	1CT:1CT	1CT:1CT	G Y	-1	-20	-16	-12	-12	-40	-35	-30	-30	-20	
J2045J369E	12	1CT:1CT	1CT:1CT	G Y	-1	-20	-16	-12	-12	-40	-35	-30	-30	-20	
J2045J389E	16	1CT:1CT	1CT:1CT	G Y	-1	-20	-16	-12	-12	-40	-35	-30	-30	-20	

Notes:

1. Part numbers code (A,B,C, D): A = 2x4, B = 2x6, C = 2x8, D = 2x2
2. Both transmit and receive channels meet IEEE 802.3 specifications.
3. Different electrical specifications can be accommodated.
4. Bi-color LEDs Left/Right: G = green; Y = yellow; N/A = none

RJ45 Durability Testing Rating

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

RJ45 Material Specification

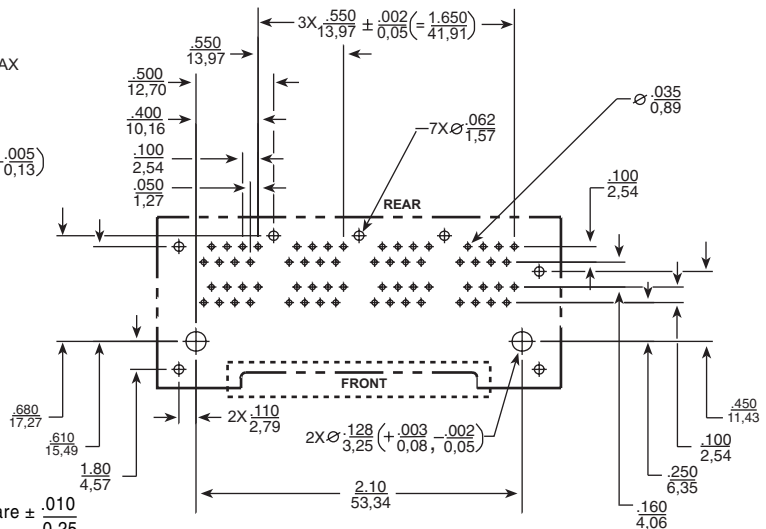
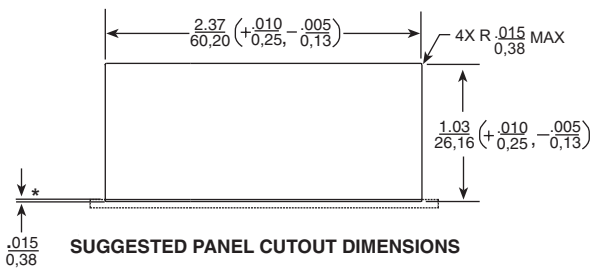
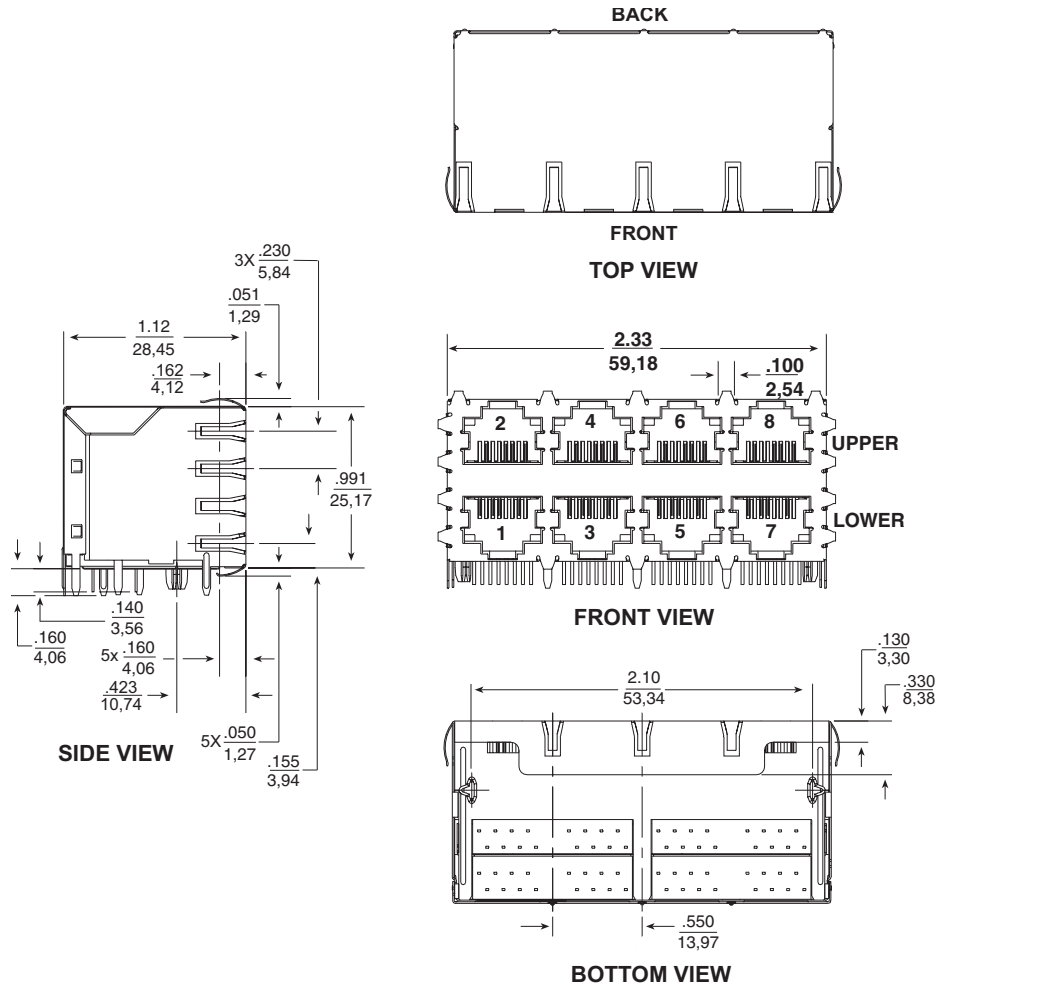
Part Number	Shield		Contact			Housing	
	Material	Finish	Material	Plating Area	Solder Area	Material	Specification
J2 Series	Brass	10-20m inches Nickel over 10-20m inches Nickel	Phosphor Bronze	Nickel underplating and selective gold plating 30 μ inches	120 μ inches Sn90/Pb10 over 50 μ inches nickel	Thermoplastic	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.

J2 Series (No LEDs) Mechanicals

2 X 4



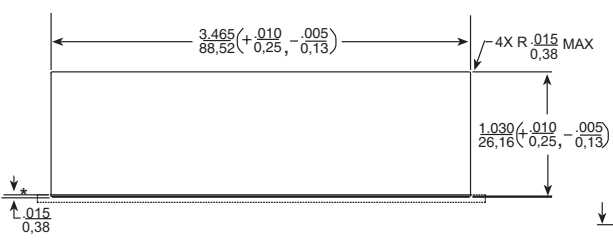
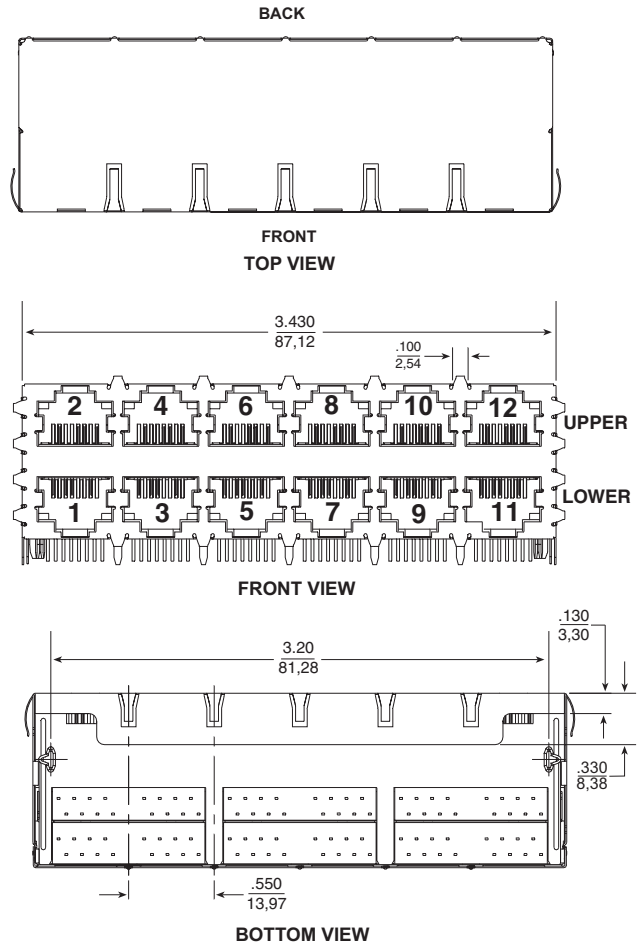
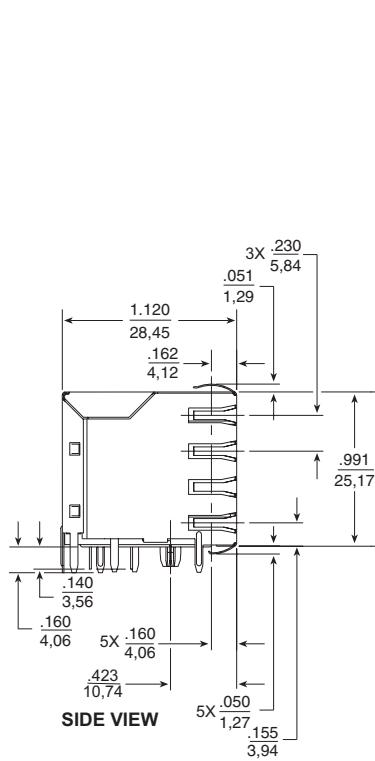
Dimensions: $\frac{\text{Inches}}{\text{mm}}$ Unless otherwise specified, all tolerances are $\pm \frac{.010}{0,25}$

SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE

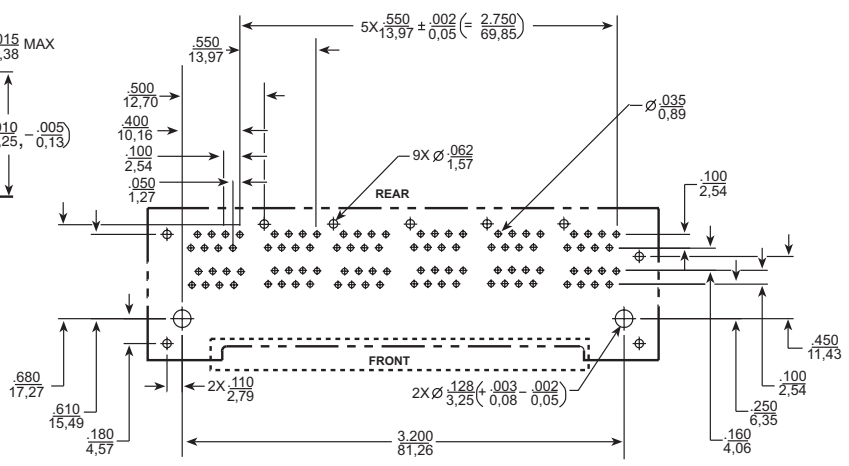
NOTE: Required PCB cutout to allow clearance for EMI tabs on connector.

J2 Series (No LEDs) Mechanicals

2 X 6



*This cutout below top of the PCB

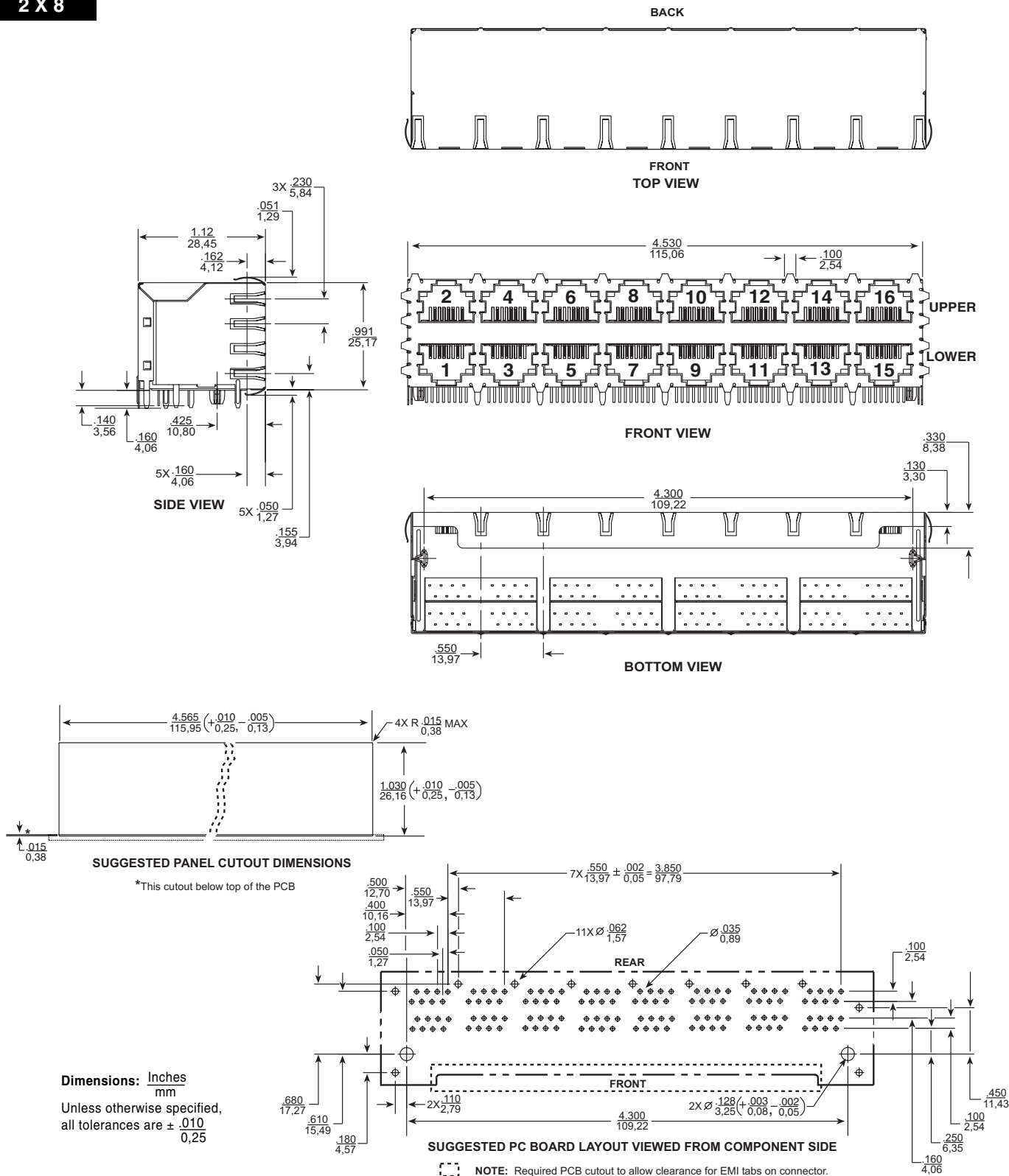


Dimensions: $\frac{\text{Inches}}{\text{mm}}$ Unless otherwise specified, all tolerances are $\pm \frac{.010}{0.25}$

NOTE: Required PCB cutout to allow clearance for EMI tabs on connector.

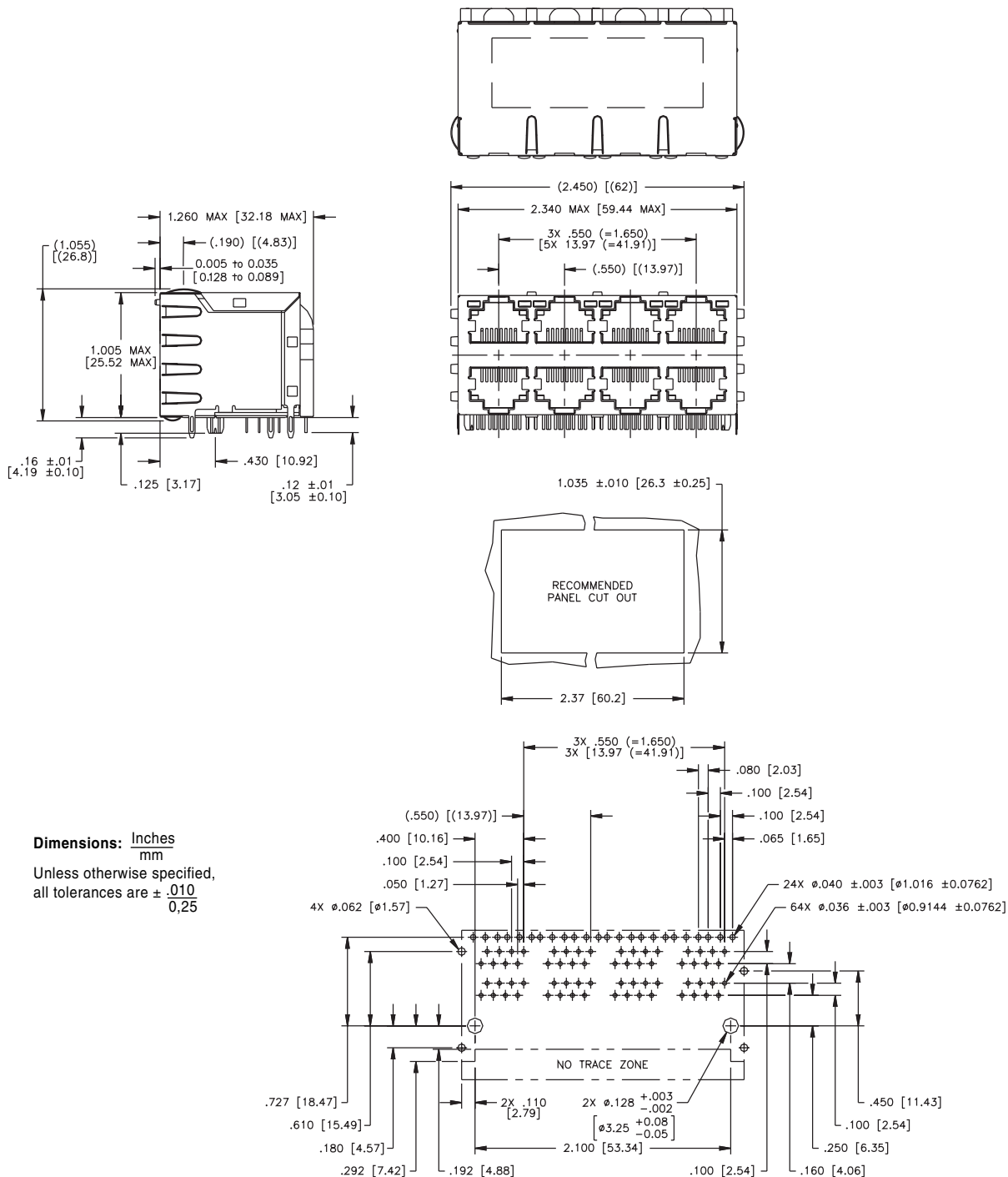
J2 Series (No LEDs) Mechanicals

2 X 8



J2 Series (With LEDs) Mechanicals

2 X 4

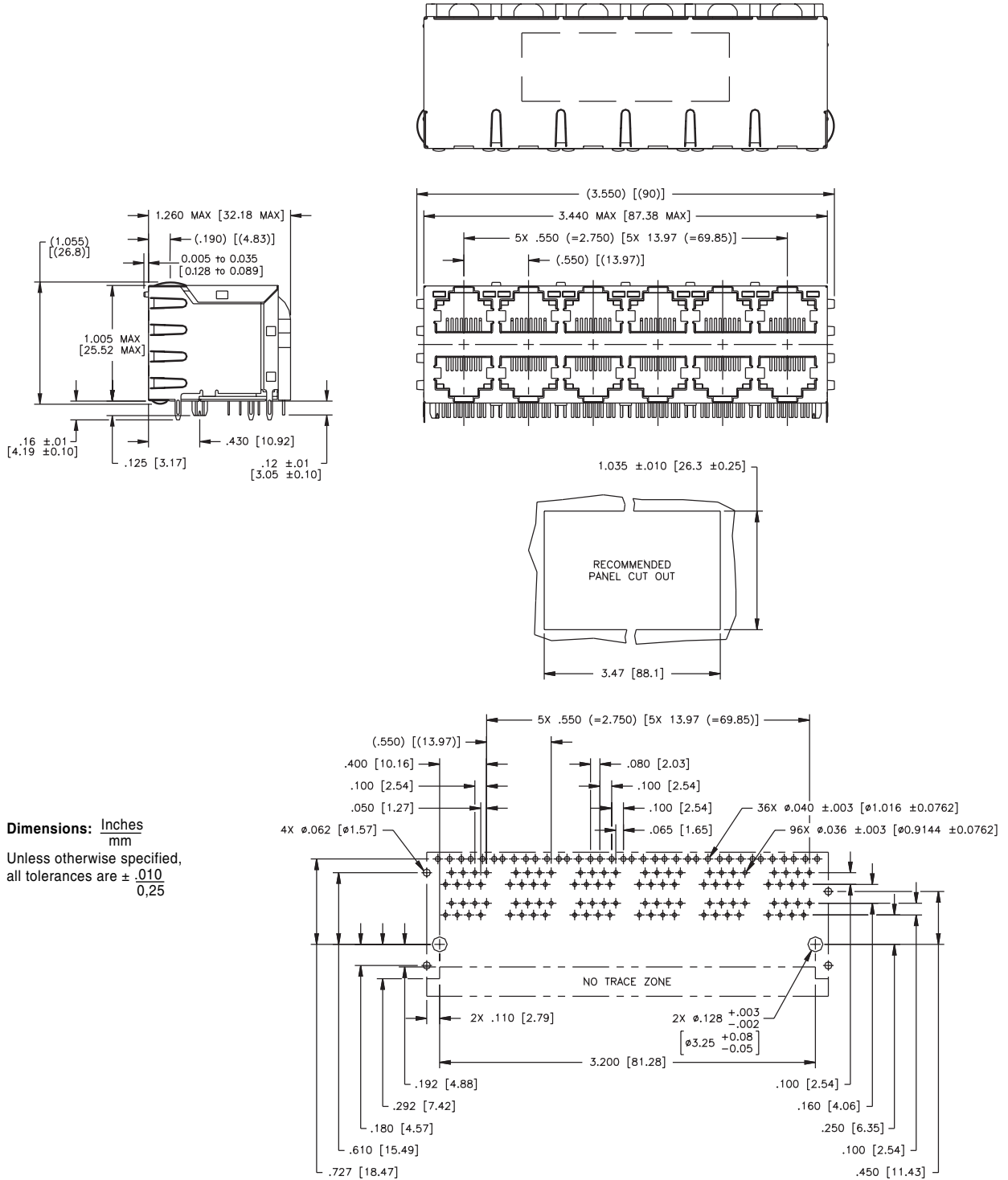


SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE

NOTE: Required PCB cutout to allow clearance for EMI tabs on connector.

J2 Series (With LEDs) Mechanicals

2 X 6



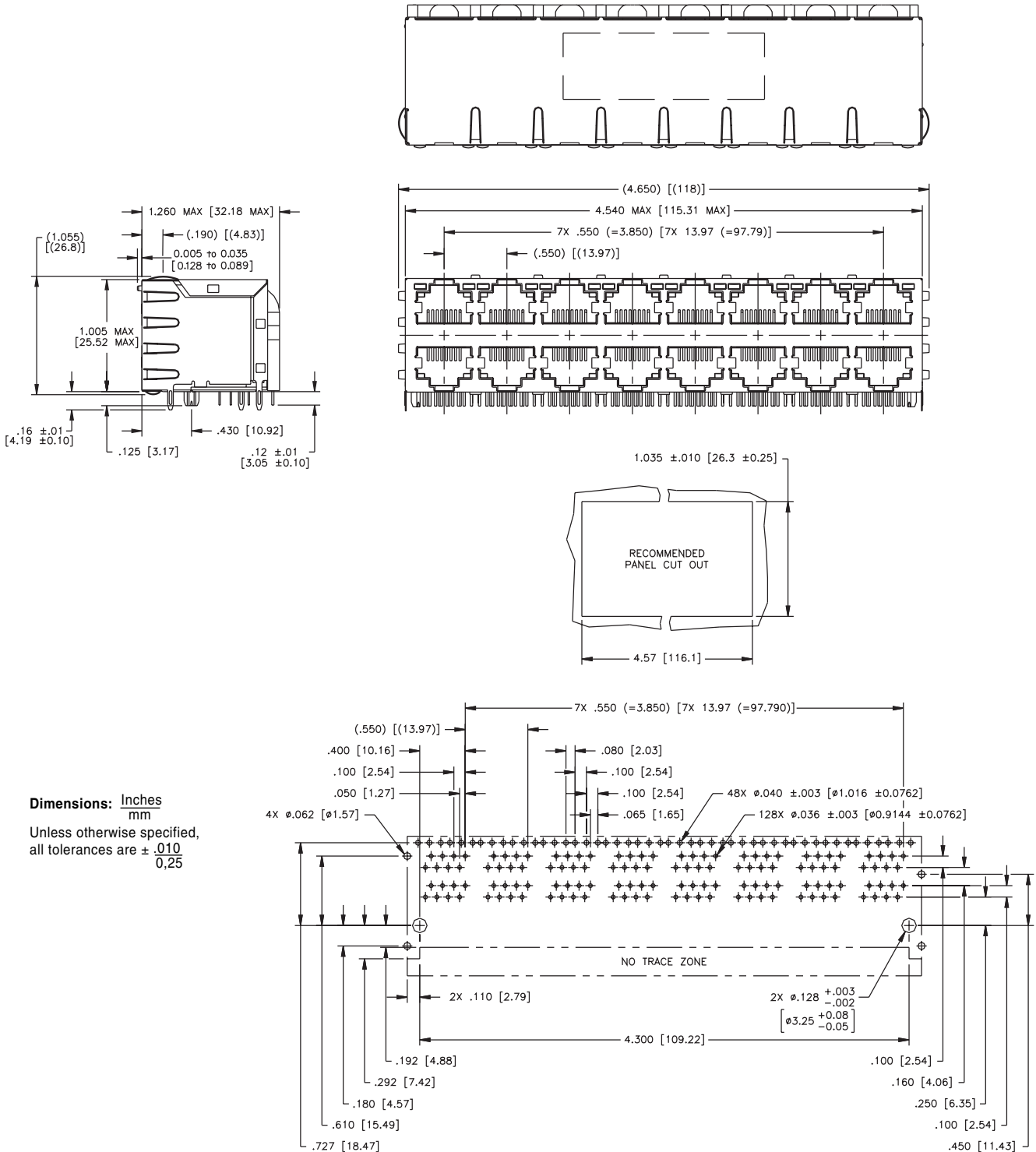
Dimensions: Inches
mm
Unless otherwise specified,
all tolerances are ± .010
0,25

SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE

NOTE: Required PCB cutout to allow clearance for EMI tabs on connector.

J2 Series (With LEDs) Mechanicals

2 X 8



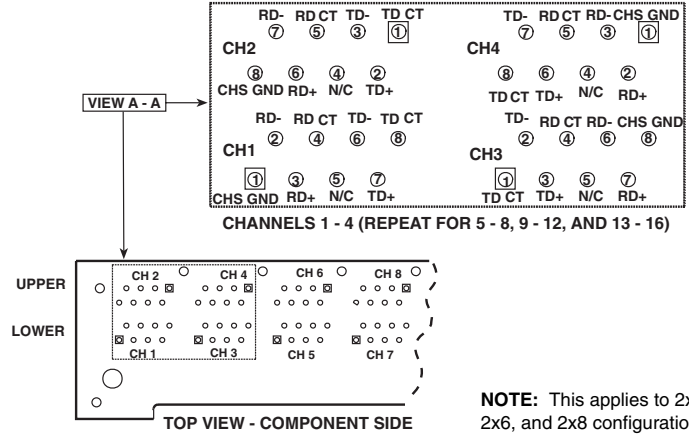
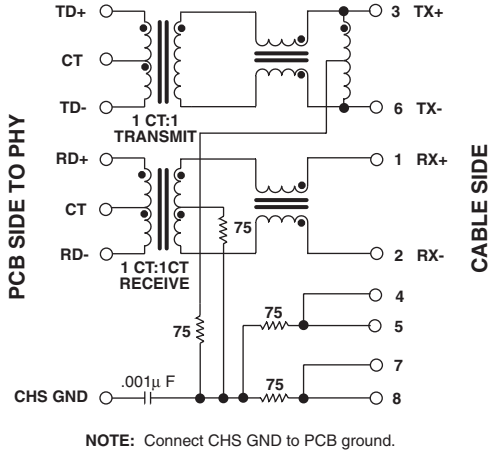
Dimensions: Inches
mm
Unless otherwise specified,
all tolerances are ± .010
0.25

SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE

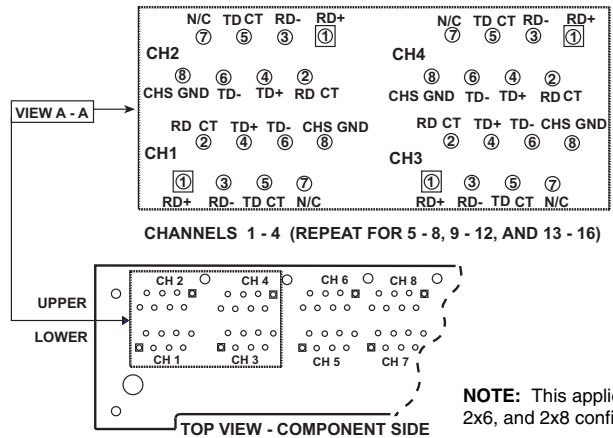
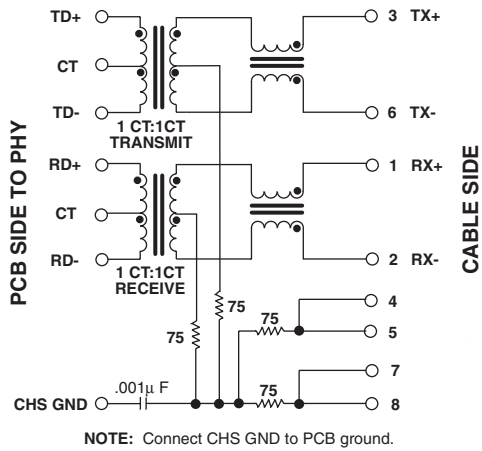
NOTE: Required PCB cutout to allow clearance for EMI tabs on connector.

J2 Series (No LEDs) Schematics

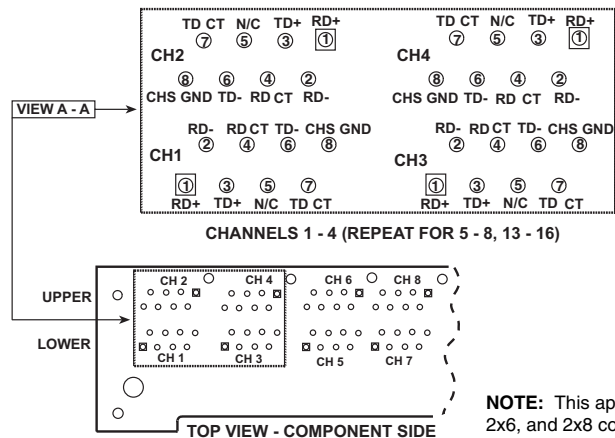
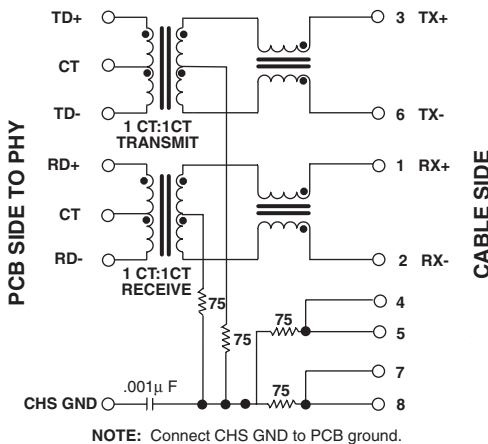
J2039



J2042

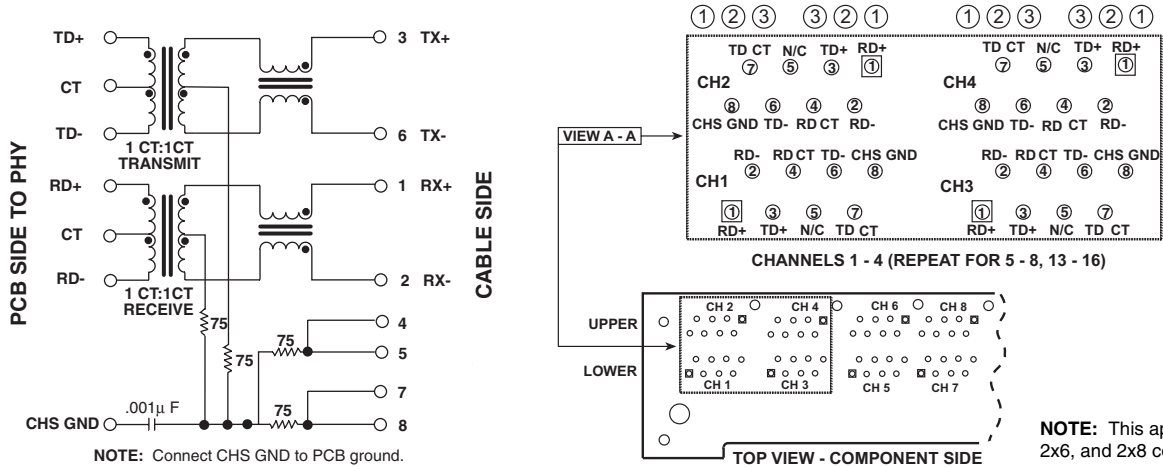


J2045

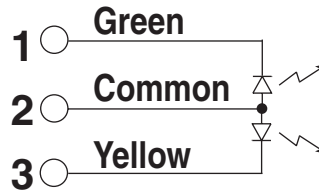


J2 Series (With LEDs) Schematics

J2045



LED Configuration



Standard LED Color	LED Wavelength ¹	Forward ² (V MAX)	Typical (V TYP)
Green	560 - 570 nm	2.5	2.1 - 2.2
Yellow	588 - 610 nm	2.5	2.1 - 2.2

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

For More Information :

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