

# PULSEJACK™

## Gigjack T12



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### Description:

10/100/1000 Base-TX RJ45 single port (1X1) Tab-UP with or without LEDs integrated magnetics connector (ICM), designed to support applications, such as Network Interface Cards (NIC), LAN-on-Motherboard (LOM), and PC applications.



### Features and Benefits:

- ⊕ Single port Tab-UP with internal magnetics for 10/100/1000 Base-TX
- ⊕ Available with or without LEDs
- ⊕ Suitable for CAT 5 and 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 802.3ab standard for 1000Base-T
- ⊕ 350  $\mu$ 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	Tab Option	LEDs <sup>3</sup> L/R	Insertion Loss TX/RX (dB TYP)				Return Loss (dB TYP) 100 $\Omega$ ( $\pm 15 \Omega$ )			Crosstalk (dB TYP)			Common Mode Rejection (dB TYP)		Hipot (MIN)
			1-100 MHz	1-10 MHz	30 MHz	60-80 MHz	1-10 MHz	30-60 MHz	60-100 MHz	1-50 MHz	50-130 MHz	@ 60 Hz 1 MIN			
JK0654218Z	UP	Y-G/G	-1.0	-20	-16	-12	-40	-35	-30	-30	-20	1500 Vrms			
JK0654219	UP	G/G	-1.0	-20	-16	-12	-40	-35	-30	-30	-20	1500 Vrms			
JK065421	UP	NONE	-1.0	-20	-16	-12	-40	-35	-30	-30	-20	1500 Vrms			
JK065401 <sup>4</sup>	UP	NONE	-1.0	-20	-16	-12	-40	-35	-30	-30	-20	1500 Vrms			

#### NOTES:

1. Both transmit and receive channels meet IEEE 802.3 specifications.
2. Different electrical and mechanical specifications can be accommodated. Contact Pulse Applications Engineering.
3. LEDs Left/Right: **G** = green; **Y** = yellow; **Y-G** = Bicolor.
4. **JK065401** is supplied without EMI tabs; please refer to Mechanical drawing for explanation of EMI tabs.

### RJ45 Durability Testing Rating

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

### RJ45 Material Specification

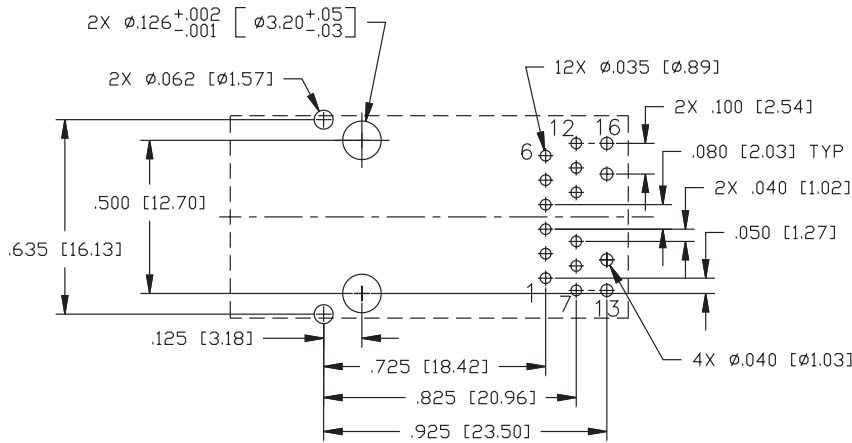
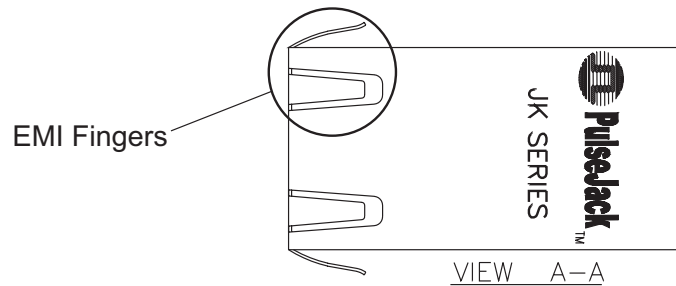
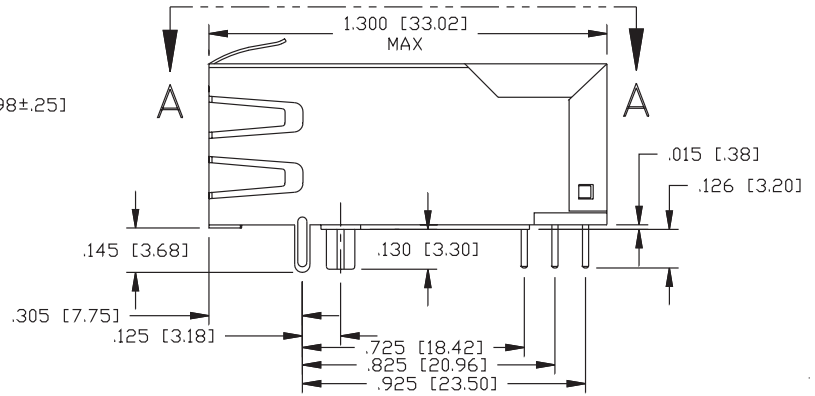
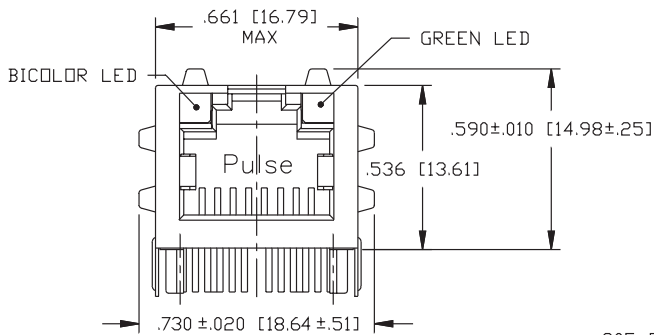
Part Number	Shield		Contact			Housing	
	Material	Finish	Material	Plating Area	Solder Area	Material	Specification
JK Series	Brass	10-20 $\mu$ inches thick nickel over 10-20 $\mu$ inches thick nickel	Phosphor Bronze	30 $\mu$ inches gold over 30-80 $\mu$ inches nickel	75-300 $\mu$ inches tin-lead over 75-300 $\mu$ inches nickel	Thermoplastic	UL 94 V-0

#### Notes:

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

### Mechanical

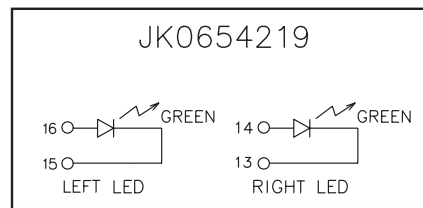
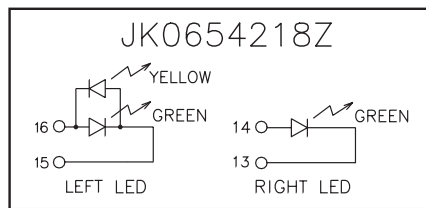
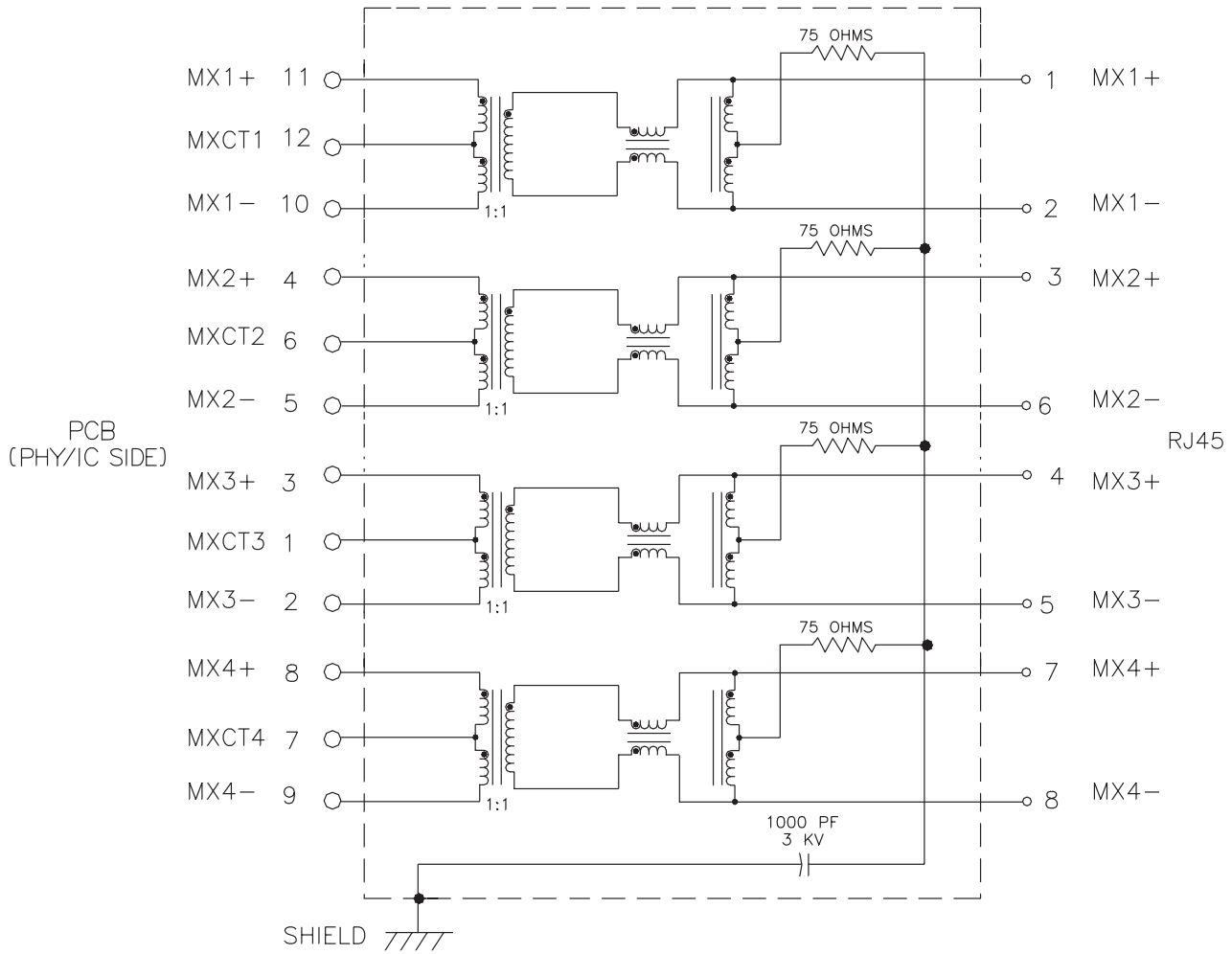
**JK0654X1XX**



SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE  
PCB LAYOUT DIMENSIONS TO BE ±.003 UNLESS OTHERWISE SPECIFIED

### Schematic

**JK0654X1XX**



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