

PULSEJACK™ THROUGH HOLE, TAB DOWN, RJ-45 JACK WITH INTEGRATED MAGNETICS



For 10/100Base-TX NIC Applications



- Magnetic designs to support every PHY
- Meets or exceeds IEEE 802.3 and ANSI X3.263 standards including 350 μ H min OCL with 8 mA bias
- Patented InterLock Base construction for high reliability
- High performance for maximum EMI suppression
- Minimum 1500 Vrms isolation per IEEE 802.3 requirement
- Independent connector evaluation completed (Contech Research, Massachusetts)

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

Part Number	Turns ^{1,2} Ratios		LEDs ³	Insertion Loss TX/RX (dB MAX)	Return Loss (dB MIN) 100 Ω ($\pm 15 \Omega$)					Crosstalk (dB TYP)			Common Mode Rejection (dB TYP)		Hipot (Vrms MIN)
	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	
J0006D21	1CT:1	1CT:1	—	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500	
J0006D21B	1CT:1	1CT:1	G/Y	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500	
J0010D11	N/A	N/A	—	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500	
J0011D11	1CT:1CT	1CT:1CT	—	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500	
J0011D21	1CT:1CT	1CT:1CT	—	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500	
J0011D21B	1CT:1CT	1CT:1CT	G/Y	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500	
J0026D01B	1CT:1CT	1CT:1CT	G/Y	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500	
J0026D01F ⁴	1CT:1CT	1CT:1CT	G/Y	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500	
J0026D11	1CT:1CT	1CT:1CT	—	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500	
J0026D21	1CT:1CT	1CT:1CT	—	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500	
J0026D21E	1CT:1CT	1CT:1CT	G/G	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500	
J0026D21G ⁵	1CT:1CT	1CT:1CT	YG/G	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500	
J0033D21	1.25CT:1CT	1CT:1CT	—	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500	
J0035D21B	1CT:1CT	1CT:1CT	G/Y	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500	
J0037D21	N/A	N/A	—	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500	
J0048D21M	1CT:1	1CT:1	G/G	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500	
J0073D01B	1CT:2.5CT	1CT:1	G/Y	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-20	1500	

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; — = none.
4. LEDs with internal resistor.
5. Bi-color Left LED

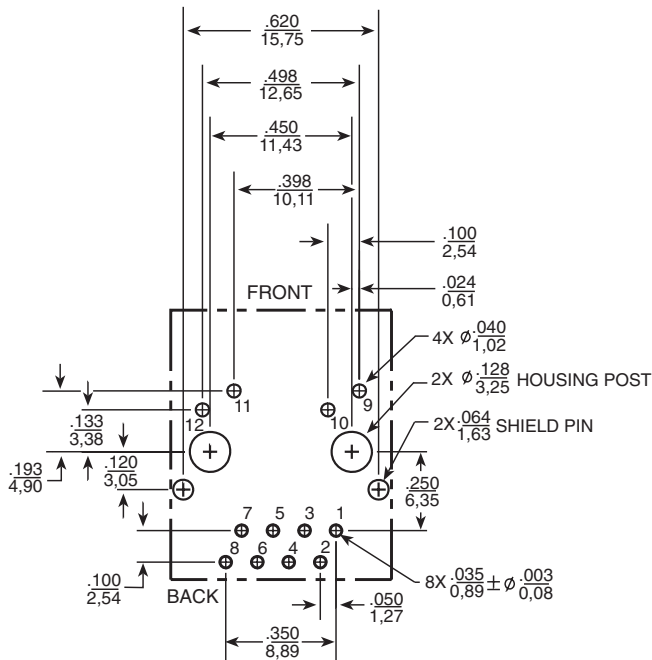
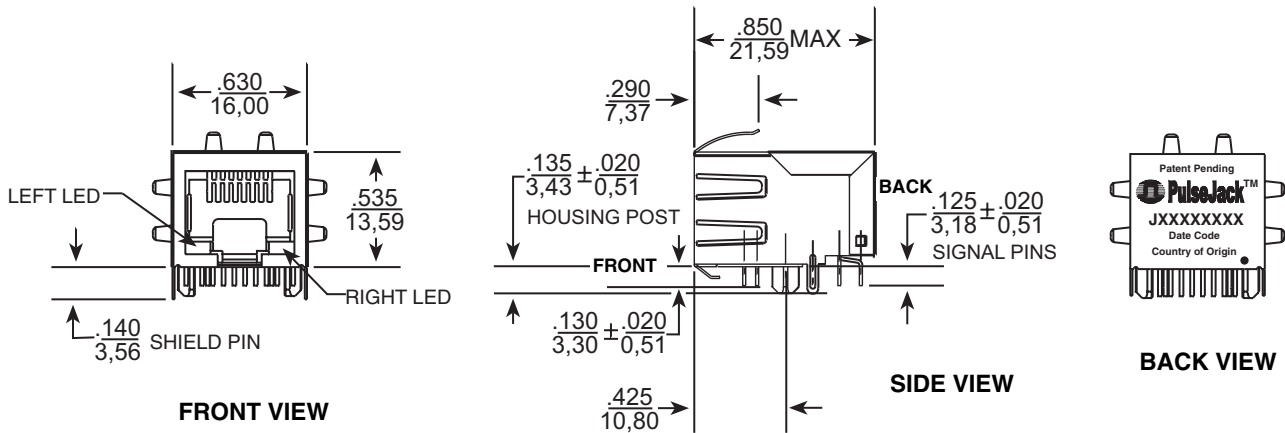
This is a single port platform. Contact Applications Engineering for other platforms at (858) 674-8100 for more information.

PULSEJACK™ THROUGH HOLE, TAB DOWN RJ-45 JACK WITH INTEGRATED MAGNETICS

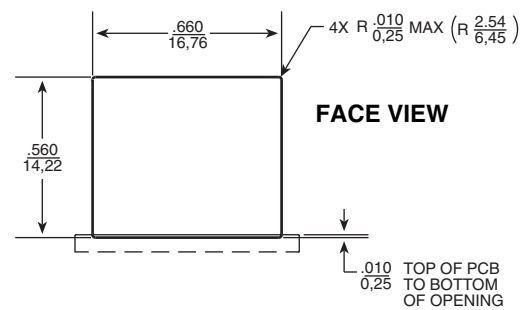
For 10/100Base-TX NIC Applications



Mechanicals



SUGGESTED PCB LAYOUT



RECOMMENDED PANEL CUTOUT

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

* With a forward current of 20 mA

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

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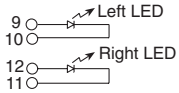


Pulse
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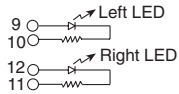
Schematics

LED Configuration

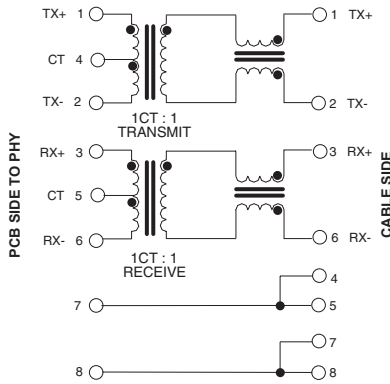
LEDs without Internal Resistors



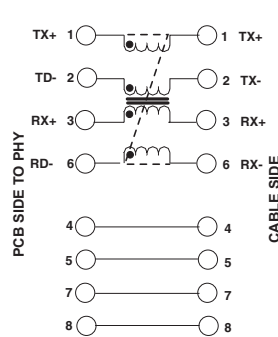
LEDs with Internal Resistors



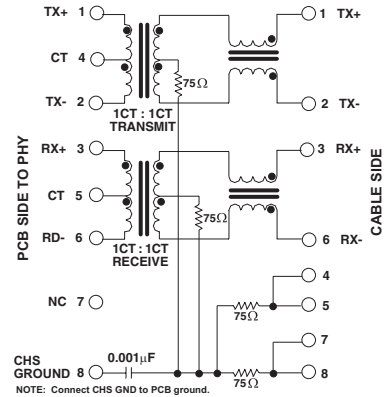
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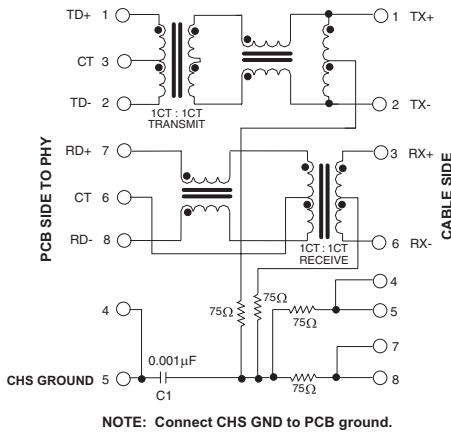
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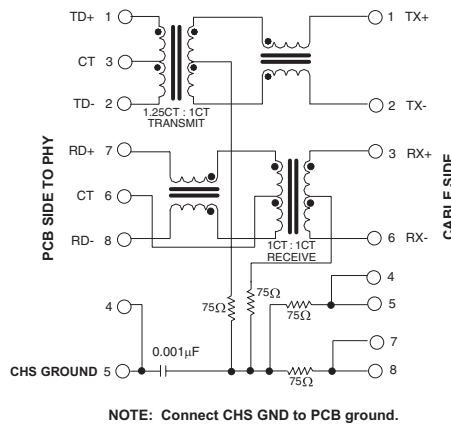
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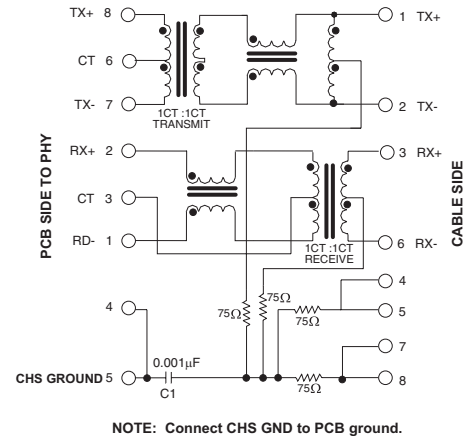
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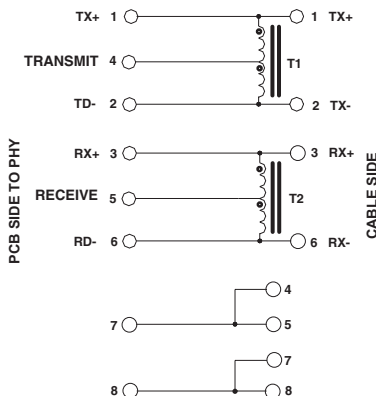
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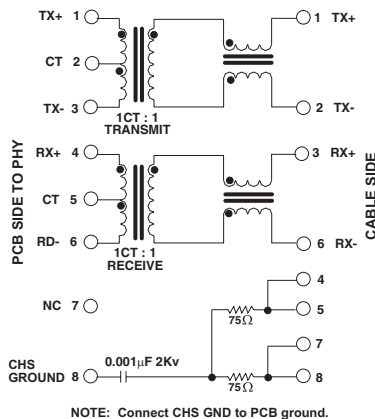
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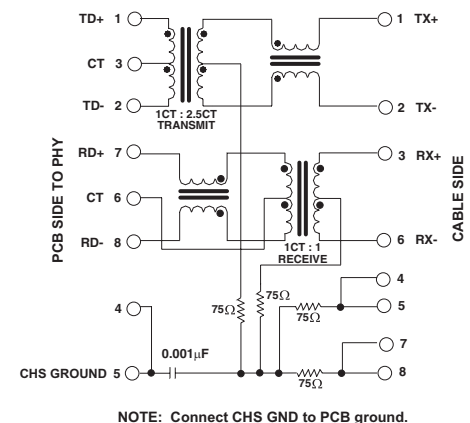
J0037



J0048



J0073



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Application Notes

Advantages of the PulseJack Modules

Increased Reliability

Pulse developed a patented method for ensuring the quality, consistency, and connection integrity of encapsulated coils and other three-dimensional electronic components. The InterLock Base consists of an internal plastic carrier that holds the coil firmly in place and provides precisely engineered "lead-channels" to lock together the lead wires and the leadframe pins. All of the InterLock Base interconnections are then simultaneously dip soldered, providing for both efficiency and uniformity for best common mode rejection and crosstalk.

Higher Manufacturing Yields

Because of this Pulse patented higher reliability method, there is less of a chance of opens and shorts, thus providing higher yields.

Consistent Electrical and Magnetic Performance

- With internal magnetics specifically oriented on all parts, there are more consistent on all functional tests. This is optimized for best crosstalk, common mode rejection and return loss.
- With the selection of common mode material and winding techniques, common mode noise rejection maintains integrity to higher frequencies.
- Multiple tabs around shield-to-ground, shield-to-chassis, and shunt noise to ground for improved EMI suppression.

Materials

Housing	Thermoplastic - UL94V-0
Contacts	Phosphorous Bronze, Nickel underplating and selective gold plating 50 μ inches max.
PCB Pins	Phosphorous Bronze with 120 μ inches Sn90/Pb10 over 50 μ inches Nickel.
Shield	Cartridge Brass with 10-20 μ inches Nickel over 10-20 μ inches Nickel.

Part Numbering System

Part Number Format: J X XXX X X X X

Example PulseJack Part Number:

J	0	006	D	2	1	B															
Connector Products	Platform	Internal Magnetics	Shield Type	EMI Tabs	Number of Ports	LED Options															
	"0" through hole, locking tab down 8 pin, single.	Additional electrical specifications can be accommodated. Contact Pulse Applications Engineering.	"D" is standard shield type. Additional mechanical specifications can be accommodated. Contact Pulse Applications Engineering.	"0": no tabs "1": 2 tabs top 2 tabs bottom "2": 2 tabs top 2 tabs each side 2 tabs bottom	"1" single port	<table border="0"> <tr> <td></td> <td>Left LED¹</td> <td>Right LED¹</td> </tr> <tr> <td>"B"</td> <td>Green</td> <td>Yellow</td> </tr> <tr> <td>"E"</td> <td>Green</td> <td>Green</td> </tr> <tr> <td>"F"²</td> <td>Green</td> <td>Yellow</td> </tr> <tr> <td>"G"</td> <td>Yellow/Green</td> <td>Green</td> </tr> </table>		Left LED¹	Right LED¹	"B"	Green	Yellow	"E"	Green	Green	"F" ²	Green	Yellow	"G"	Yellow/Green	Green
	Left LED¹	Right LED¹																			
"B"	Green	Yellow																			
"E"	Green	Green																			
"F" ²	Green	Yellow																			
"G"	Yellow/Green	Green																			

NOTE: Specify resistor value, voltage drop across LED and desired current, or refer to table, page 2.

Note: 1. Front view
2. "F" LEDs include internal resistors.

For More Information :

UNITED STATES (Worldwide) 12220 World Trade Drive San Diego, CA 92128 U.S.A. http://www.pulseeng.com TEL: 858 674 8100 FAX: 858 674 8262	UNITED KINGDOM (Northern Europe) 1 & 2 Huxley Road The Surrey Research Park Guildford, Surrey GU2 5RE United Kingdom TEL: 44 1483 401700 FAX: 44 1483 401701	FRANCE (Southern Europe) Zone Industrielle F-39270 Orgelet France TEL: 33 3 84 35 04 04 FAX: 33 3 84 25 46 41	SINGAPORE (Southern Asia) 150 Kampong Ampat #07-01/02 KA Centre Singapore 368324 TEL: 65 287 8998 FAX: 65 280 0080	TAIWAN, R.O.C. (Northern Asia) 3F-4, No. 81, Sec. 1 HsinTai Wu Road Hsi-Chih, Taipei Hsien Taiwan, R.O.C. Tel: 886 2 2698 0228 FAX: 886 2 2698 0948	HONG KONG (China/Hong Kong) 19/F, China United Plaza 1008 Tai Nan West Street Cheung Sha Wan, Kowloon Hong Kong, China TEL: 852 2788 6588 FAX: 852 2776 1055	DISTRIBUTOR
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