

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 L/R	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			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	@ 60 Hz 1 MIN
J0006D21	1CT:1	1CT:1	—	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-30	-20	1500
J0006D21B	1CT:1	1CT:1	G/Y	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-30	-20	1500
J0010D11	N/A	N/A	—	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-30	-20	1500
J0011D11	1CT:1CT	1CT:1CT	—	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-30	-20	1500
J0011D21	1CT:1CT	1CT:1CT	—	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-30	-20	1500
J0011D21B	1CT:1CT	1CT:1CT	G/Y	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-30	-20	1500
J0026D01B	1CT:1CT	1CT:1CT	G/Y	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-30	-20	1500
J0026D01F ⁴	1CT:1CT	1CT:1CT	G/Y	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-30	-20	1500
J0026D11	1CT:1CT	1CT:1CT	—	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-30	-20	1500
J0026D21	1CT:1CT	1CT:1CT	—	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-30	-20	1500
J0026D21E	1CT:1CT	1CT:1CT	G/G	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-30	-20	1500
J0026D21G ⁵	1CT:1CT	1CT:1CT	YG/G	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-30	-20	1500
J0033D21	1.25CT:1CT	1CT:1CT	—	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-30	-20	1500
J0035D21B	1CT:1CT	1CT:1CT	G/Y	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-30	-20	1500
J0037D21	N/A	N/A	—	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-30	-20	1500
J0048D21M	1CT:1	1CT:1	G/G	-1.0	-20	-16	-12	-10	-40	-35	-30	-30	-30	-20	1500
J0073D01B	1CT:2.5CT	1CT:1	G/Y	-1.0	-20	-16	-12	-10	-40	-35	-30	-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

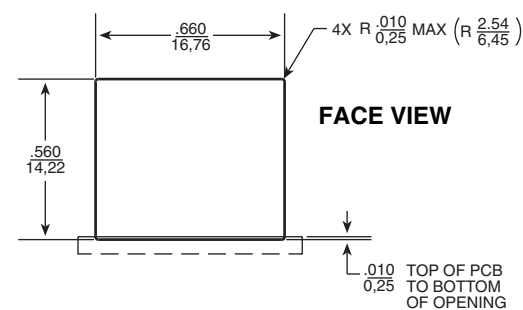
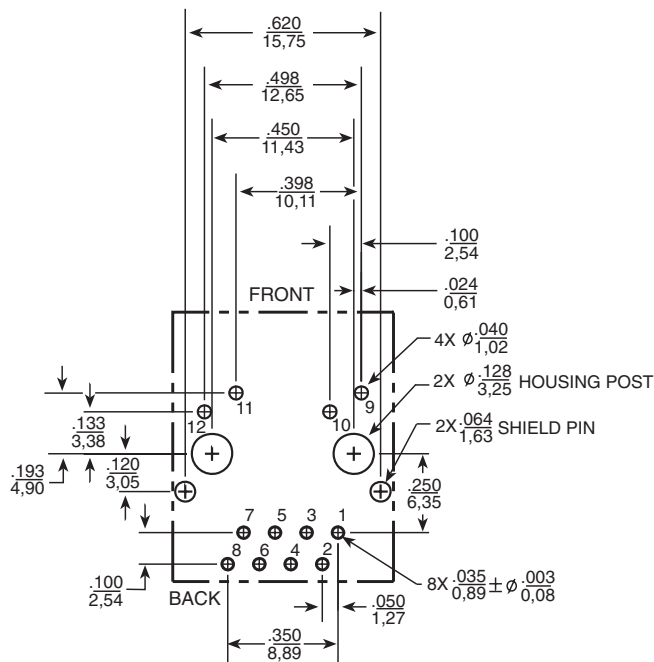
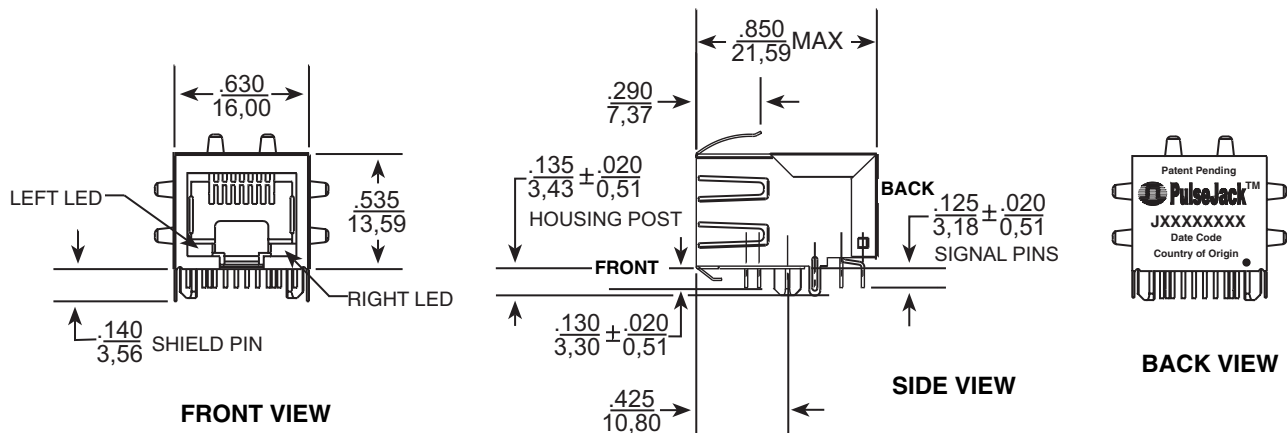
This is a single port platform. Contact Applications Engineering for other platforms at (858) 674-8100 for more information.

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Mechanicals



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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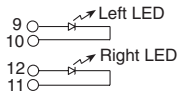


Pulse
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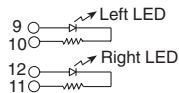
Schematics

LED Configuration

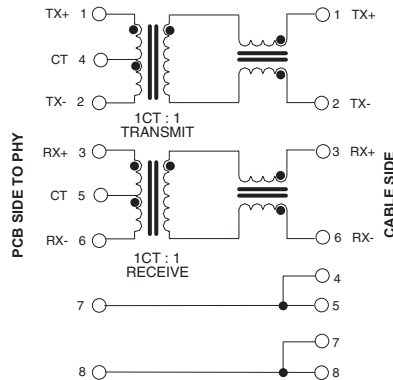
LEDs without Internal Resistors



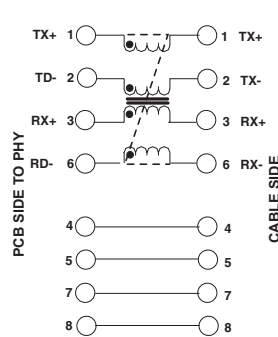
LEDs with Internal Resistors



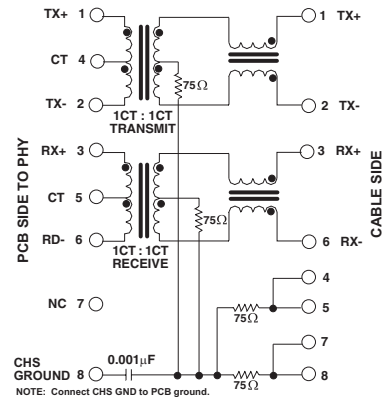
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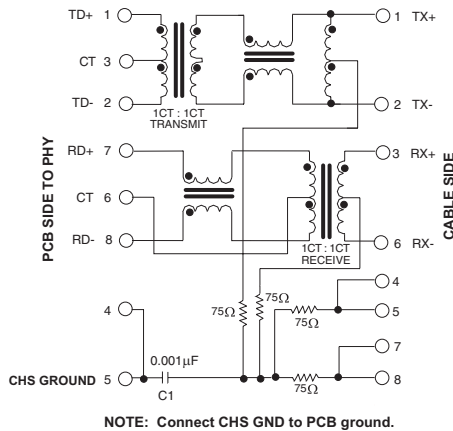
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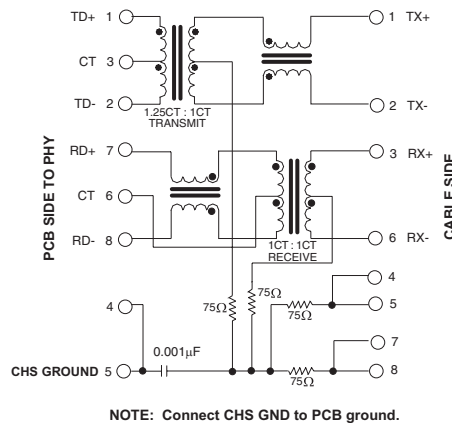
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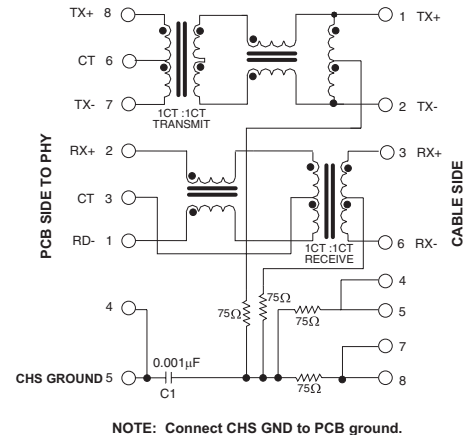
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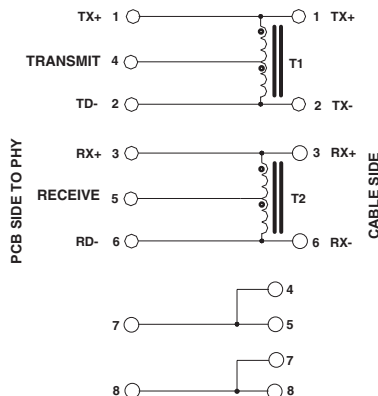
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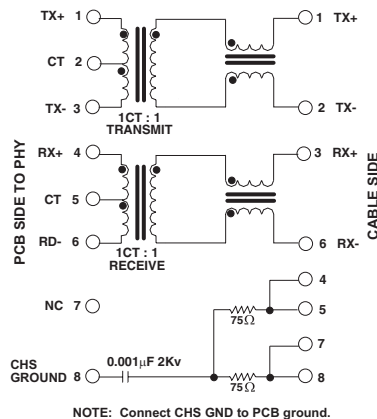
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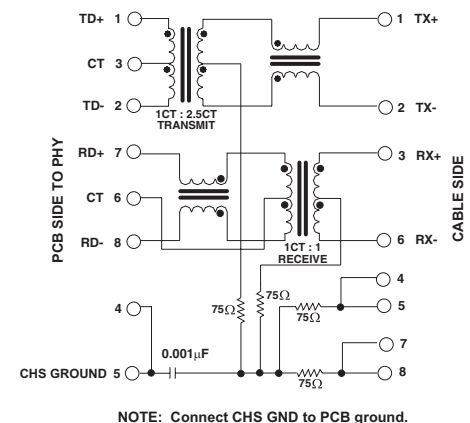
J0037



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

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

For More Information :

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