FastJack™

1x1 Tab-down 10/100BASE-TX PoE RJ45

HALO ELECTRONICS, INC.

Product Features:

- 10/100BASE-TX Ethernet RJ45
- IEEE802.3af PoE Compliant
- 100% Compliance Testing
- 1500Vrms Hi-Pot
- 30µ" Gold (min) on Contacts
- Proprietary Robust Contact Design
- UL60950 and UL62368 Recognized

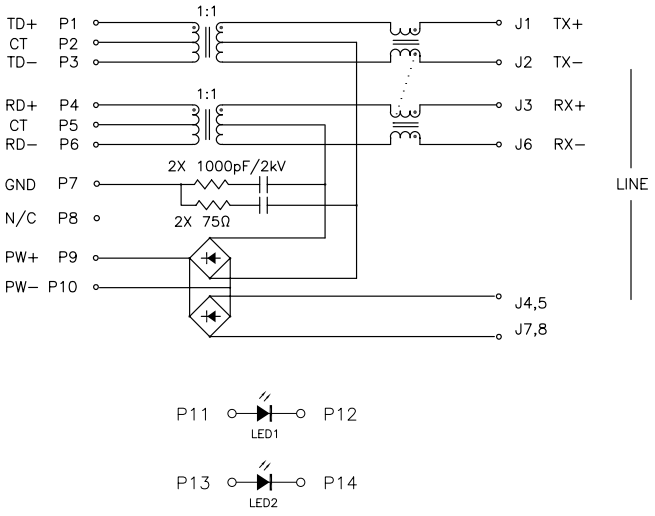
Part Number					Return Loss (min)			
Standard Temp (0 to 70°C)	Extended Temp (-40 to +85°C)	Circuit	LED's (L/R)	Current	1-30MHz	40MHz	50MHz	60-80MHz
HFJ11-RP44ERL	HFJ11-RPE44ERL	A	None	350mA	-18dB	-15.5dB	-13.6dB	-12dB
HFJ11-RP44E-L11RL	HFJ11-RPE44E-L11RL	A	G/G	350mA	-18dB	-15.5dB	-13.6dB	-12dB
HFJ11-RP44E-L12RL	HFJ11-RPE44E-L12RL	A	G/Y	350mA	-18dB	-15.5dB	-13.6dB	-12dB
HFJ11-RP44E-L15RL	HFJ11-RPE44E-L15RL	A	G/G(Y)	350mA	-18dB	-15.5dB	-13.6dB	-12dB
HFJ11-RP44E-L21RL	HFJ11-RPE44E-L21RL	A	Y/G	350mA	-18dB	-15.5dB	-13.6dB	-12dB
HFJ11-RP48ERL*	HFJ11-RPE48ERL*	B	None	350mA	-18dB	-15.5dB	-13.6dB	-12dB
HFJ11-RP48E-L11RL*	HFJ11-RPE48E-L11RL*	B	G/G	350mA	-18dB	-15.5dB	-13.6dB	-12dB
HFJ11-RP48E-L12RL*	HFJ11-RPE48E-L12RL*	B	G/Y	350mA	-18dB	-15.5dB	-13.6dB	-12dB
HFJ11-RP48E-L15RL*	HFJ11-RPE48E-L15RL*	B	G/G(Y)	350mA	-18dB	-15.5dB	-13.6dB	-12dB
HFJ11-RP48E-L21RL*	HFJ11-RPE48E-L21RL*	B	Y/G	350mA	-18dB	-15.5dB	-13.6dB	-12dB

*RP48 and RPE48 for use with current drive Auto-MDIX PHY's only

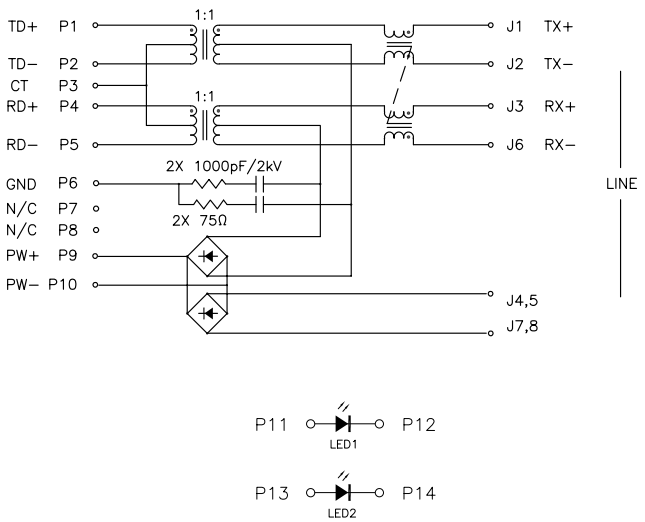
Notes:
1. When using the RP44E or RPE44E circuits please see PCB layout app note at end of datasheet
2. LED Key : G = Green, Y = Yellow, ( ) = Bi-Color
3. Other LED colors, bi-colors, polarities, and current limiting versions available
4. Available without ground/EMI tabs
5. Part specific datasheets available
6. Insertion Loss -1.1dB max
7. Higher current parts available

Circuit A

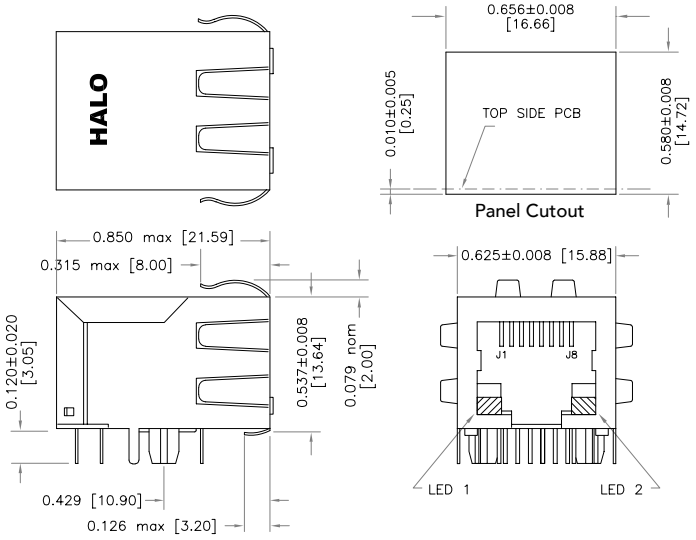
If using circuit A please see PCB layout app note on last page



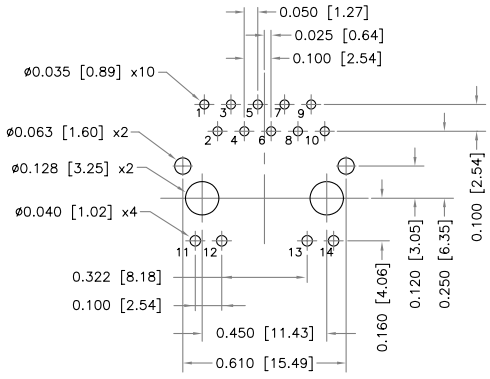
Circuit B



Mechanical



Dimensions are in inches [mm]



Recommended PCB Layout (Component Side)

* Parts numbers without LED's omit pins 11 through 14

HALO ELECTRONICS, INC.

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www.haloelectronics.com

HALO® Electronics is a leading supplier of high quality communication magnetics including signal transformers, filters, CMR chokes, PoE power transformers, DC/DC converters, and integrated Ethernet connectors. HALO's leading edge technology solutions are manufactured in ISO9001 and ISO14001 factories offering high quality products at a competitive price.

Revised 5/2024. Download the latest version at www.haloelectronics.com/pdf/fastjack-poe-100baset.pdf

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Application Note

Solder Pad Design Considerations for FastJack™ with "Power Feed" Terminals

IEEE802.3 requires a system to meet 1500VAC or 2250VDC isolation between cable side and chip side circuits. Figure 1 shows a typical connector circuit (HFJ11-RP44ERL) with power feed on pin9 and pin10. Pin8 (no connection) creates desired separation internally inside the connecter. Externally, the concern for the designer is the spacing between pin9 and pin7 solder pads.

Minimum separation required between solder pads is 55mils to avoid electron arcing at 1500VAC voltage. Terminal holes are approximately 35mils diameter at 100mils pitch (column to column). Therefore, the 55mils separation is achievable as shown in figure 2.

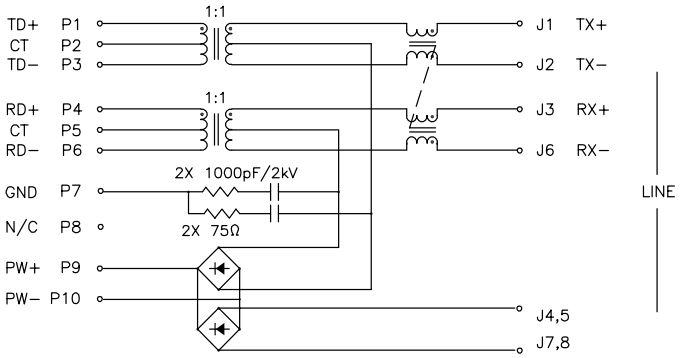
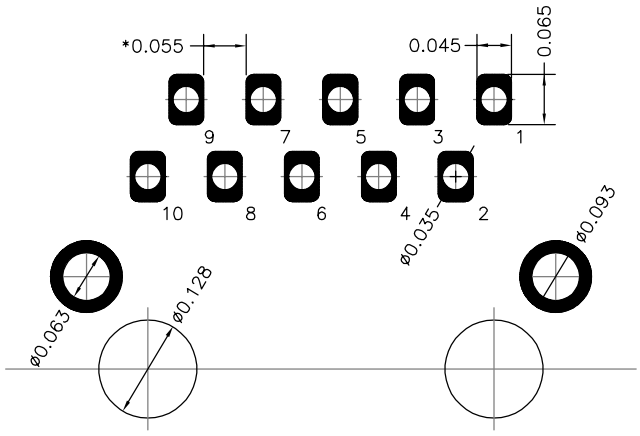


Figure 1



Recommended PCB Pattern (Bottom View)
Dimensions: Inch

Figure 2

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