

Description:

The 2x1 is a Through Hole (THT) Integrated Connector Module. The internal magnetics are designed to support 10/100/1000Base-TX applications such as LAN-on-Motherboard (LOM) and PC applications.



Features and Benefits:

- RoHS-5 peak wave solder temperature rating 235°C
- RoHS-6 peak wave solder temperature rating 260°C
- LAN interface suitable for 10/100/1000Base-TX applications
- 2x1 RJ45 design saves on PCB real estate
- RJ45 connection meets CAT3, 5e & 6 Fast Ethernet performance standard

Electrical Performance Summary:

- Meets IEEE 802.3 specification
- High performance for maximum EMI suppression
- Minimum 1500Vrms isolation per IEEE 802.3 requirement

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

RoHS-5 ³ Compliant Part No.	RoHS-6 ⁴ Compliant Part No.	Data Rate	Turns ^{1,2} Ratios		Insertion Loss TX/RX (dB MAX)	Return Loss @ 100Ω ±15Ω (dB TYP)			Crosstalk (dB MIN)			Common Mode Rejection (dB TYP)		Hipot (Vrms) (MIN)
			TX	RX		1-65 MHz	1-10 MHz	30 MHz	60-80 MHz	1-10 MHz	32-60 MHz	60-100 MHz	1-50 MHz	
JC0-0019	JC0-0019NL	10/100/1000	1CT:1	1CT:1	-1.0	-20	-16	-12	-40	-35	-30	-30	-20	1500

NOTES:

1. Both transmit and receive channels meet IEEE 802.3 specifications.
2. Different electrical specifications can be accommodated. For more information, please contact Pulse.

3. **RoHS-5** - Product does not contain 5 out of the 6 banned substances specified in the RoHS directive. Product contains lead in applications considered as solders.
4. **RoHS-6** - Product does not contain 5 out of the 6 banned substances specified in the RoHS directive. Some internal connections may contain lead in high temperature solder (solder alloys containing more than 85% lead).

RJ45 Durability Testing Rating

Part Number	Mating Force (MAX)	Unmating Force (MAX)	Durability	Plug to Jack Retention (MIN)
JC Series	5lbs./2.268kgs.	5lbs./2.268kgs.	500 Insertions	20lbs./9.072kgs.

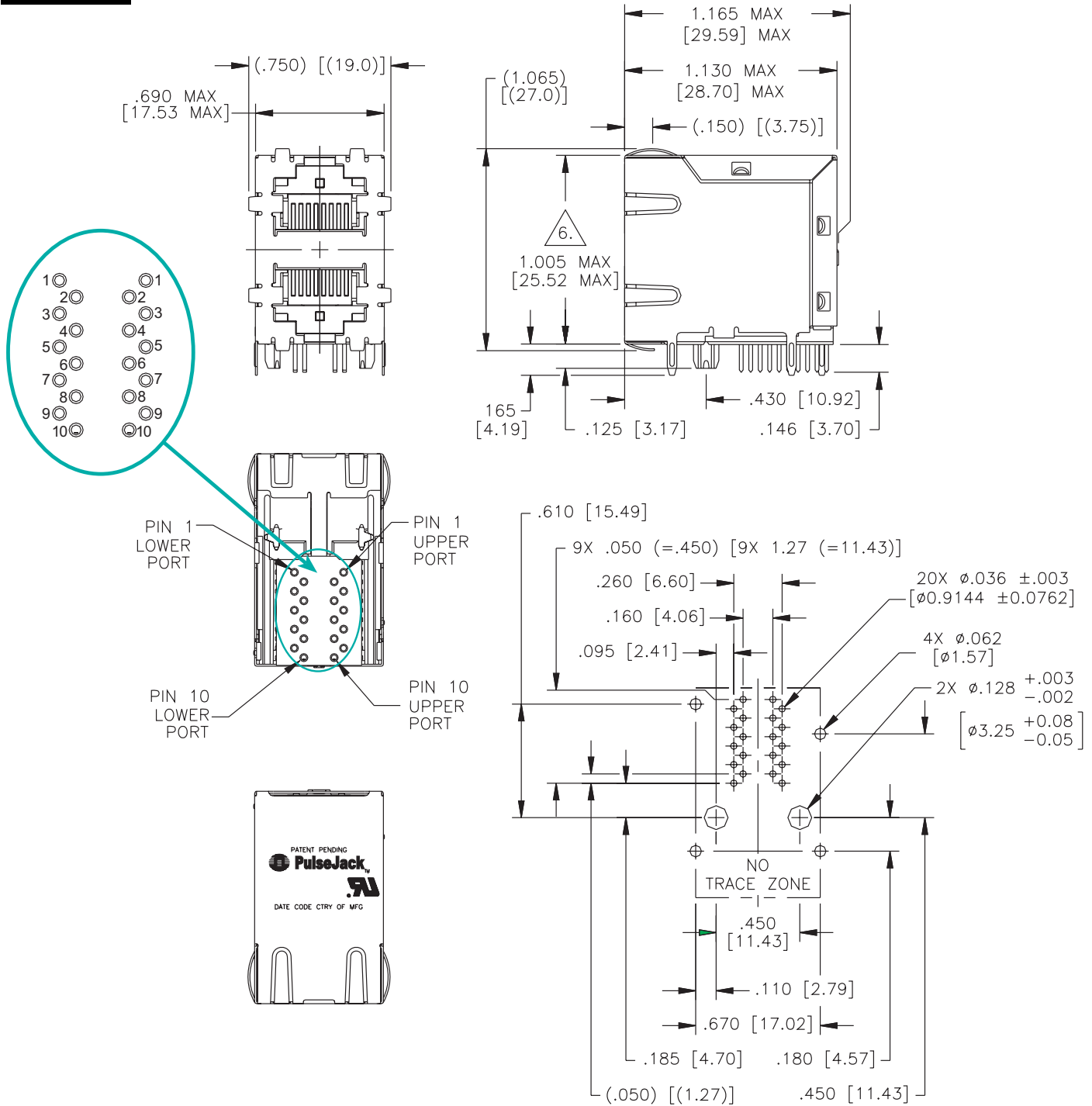
RJ45 Material Specification

Part Number	Shield		Contact			Housing	
	Material	Finish	Material	Plating Area	Solder Area	Material	Specification
JC Series	Brass	20-40μ inches thick nickel over brass	Phosphor Bronze	15μ inches gold over 30-80μ inches nickel	75-300μ inches tin-lead over 75-300μ inches bright nickel	Thermoplastic	UL 94 V-0

Notes: Connector dimensions comply with FCC dimension requirements.

Mechanical

JC0-0019

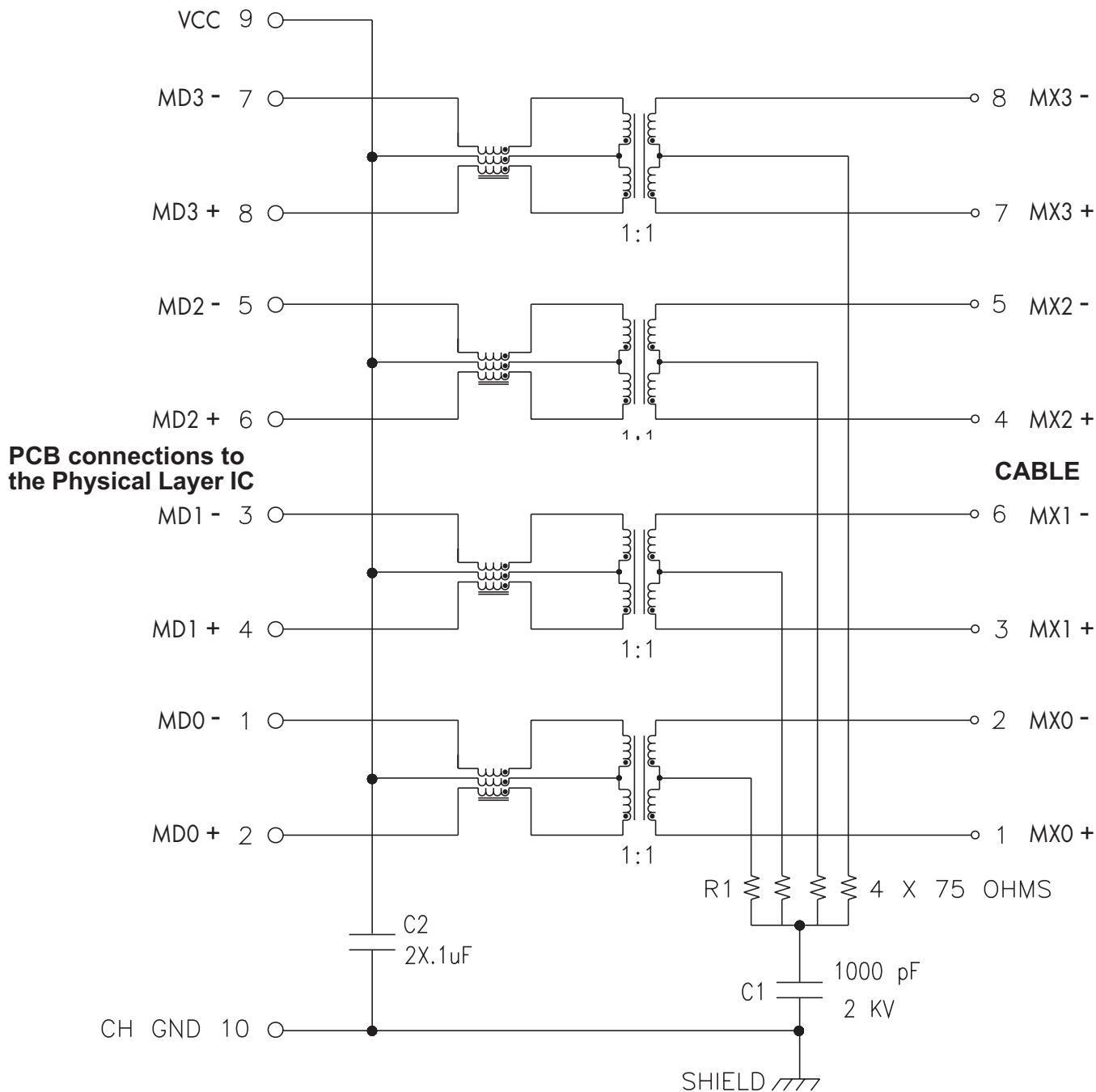


Weight8.1 grams
Tray45/tray

SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE
UNLESS OTHERWISE SPECIFIED DIMENSIONAL TOLERANCE IS \pm .002

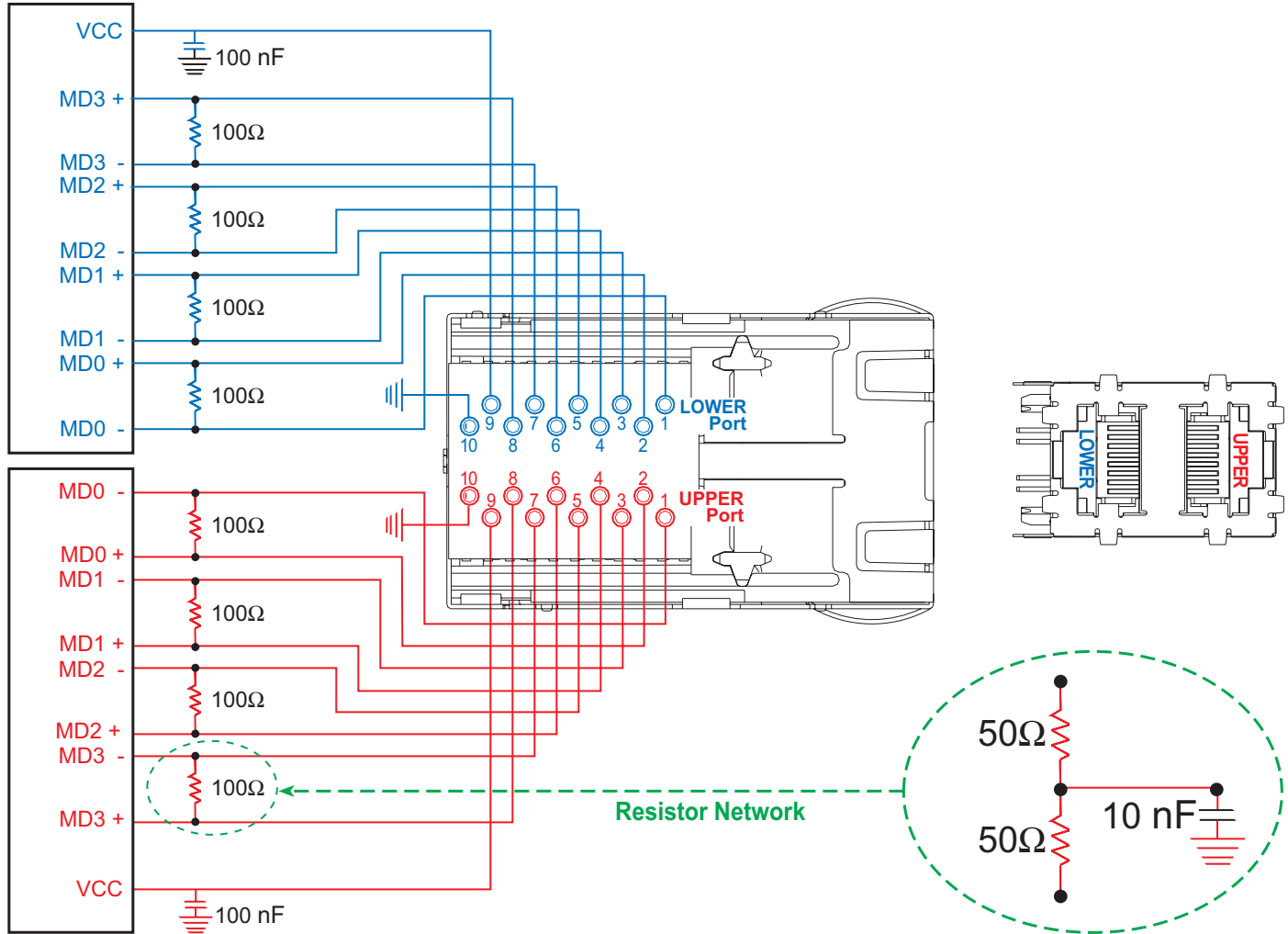
Schematic

JC0-0019



JC0-0019 Application Circuit

10/100/1000
IC PHY



PCB Layout Recommendations:

1. For maximum EMI suppression (electromagnetic interference) place the decoupling capacitors adjacent to Vcc and 50Ω connections.
2. Connections to ground should be as short as possible.
3. Connections between the 10/100/1000 IC and the connector should be direct (ideally no change in direction) and of minimum length.

For More Information:

Pulse Worldwide Headquarters

12220 World Trade Dr.
San Diego, CA 92128
U.S.A.

www.pulseeng.com

TEL: 858 674 8100

FAX: 858 674 8262

Pulse Europe

Einsteinstrasse 1
D-71083 Herrenberg
Germany

Tel: 49 7032 7806 116

Fax: 49 7032 7806 135

Pulse China Headquarters

No. 1
Industrial District
Changan, Dongguan
China

Tel: 86 769 85538070

Fax: 86 769 85538870

Pulse North China

Room 1503
XinYin Building
No. 888 YiShan Rd.
Shanghai 200233
China

Tel: 86 21 54643211/2

Fax: 86 21 54643210

Pulse South Asia

150 Kampong Ampat
#07-01/02
KA Centre
Singapore 368324

Tel: 65 6287 8998

Fax: 65 6280 0080

Pulse North Asia

No. 26
Kao Ching Rd.
Yang Mei Chen
Taoyuan Hsien
Taiwan, R. O. C.

Tel: 886 3 4641811

Fax: 886 3 4641911

Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be trademarks or registered trademarks of their respective owners.

© Copyright, 2006. Pulse Engineering, Inc. All rights reserved.