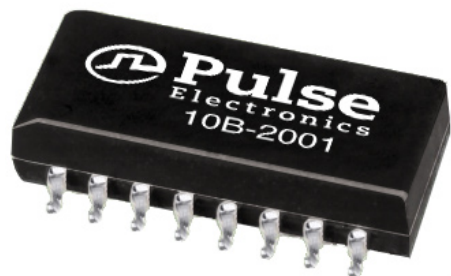
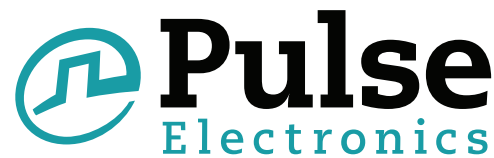


MILITARY GRADE 10BASE-T INTERFACE MODULE



- Fully integrated 10BASE-T module for adapter, hub, and motherboard applications.
- Designed to meet IEEE802.3i-1993 10BASE-T specifications.
- Low profile surface mount package
- 235°C peak infrared reflow temperature rating
- Operating temperature -40°C to +85°C.
- Parts can be screened to MIL-T-21038 and other military specific requirements.

Electrical Specifications @ 25°C — Operating Temperature -40°C to +85°C

Part Number	Insertion Loss 1-10MHz (dB max) ¹	Attenuation XMIT (dB min) ¹			Return Loss 5 to 10 MHz (dB min)		Crosstalk (dB min)	Common Mode Rejection (dB min)				Pri-Sec Isolation (Vrms min)
		30 MHz	50 MHz	50 MHz	100 ohms	98 ±13 ohms		5-10 MHz	5-10 MHz	50 MHz	100 MHz	200 MHz
10B-2001	-10	-30	-35	-35	-18	-15	-35	-60	-55	-50	-45	1500

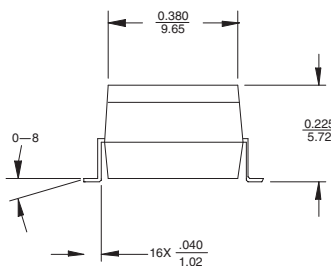
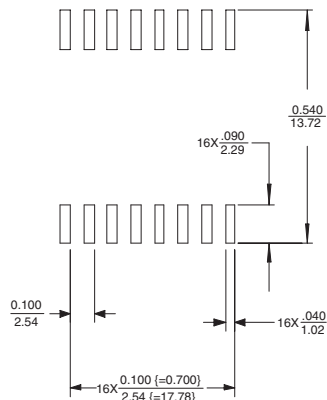
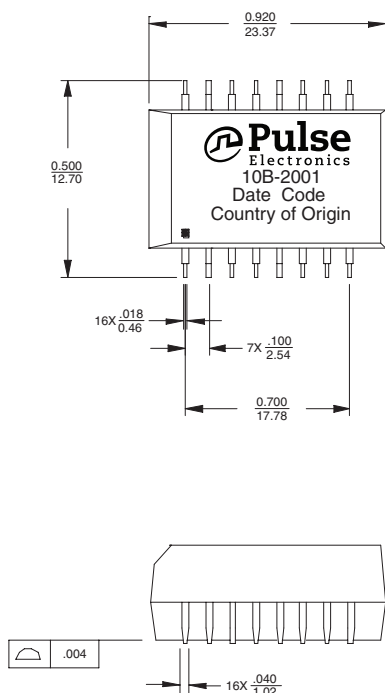
NOTES:

- Receive and transmit sides meet IEEE 8023i-1993 specification, transmit side is enhanced for FCC/VDE class B system emissions requirement.
- Specifications reflect filter sections, additional attenuation is due to pre-distortion resistors.
- A RoHS compliant version part is available. (10B-2001NL)

Mechanical

10B-2001

SUGGESTED SMD PAD LAYOUT



Weight 2.5 grams

Dimensions: Inches
mm

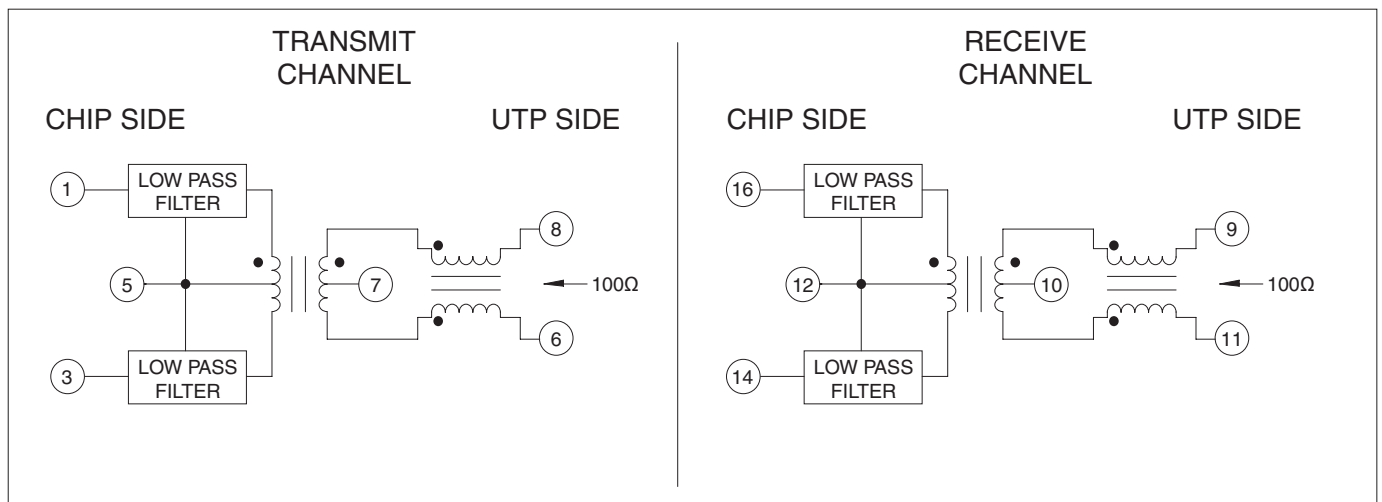
Unless otherwise specified,
all tolerances are ± 0.010
0.254

Application Notes

The module contains low pass filters, isolation transformers, and common mode chokes. These components provide impedance matching, equipment isolation, and EMI compression to comply with IEEE requirements. User compliance with FCC/CSPR class B requirements can be achieved by applying rigorous design guidelines to suppress noise mechanisms. Attention to high frequency signal paths, proper PCB grounding techniques, and component placement is critical. Pins 5 and 12, when grounded, provide noise return paths. At

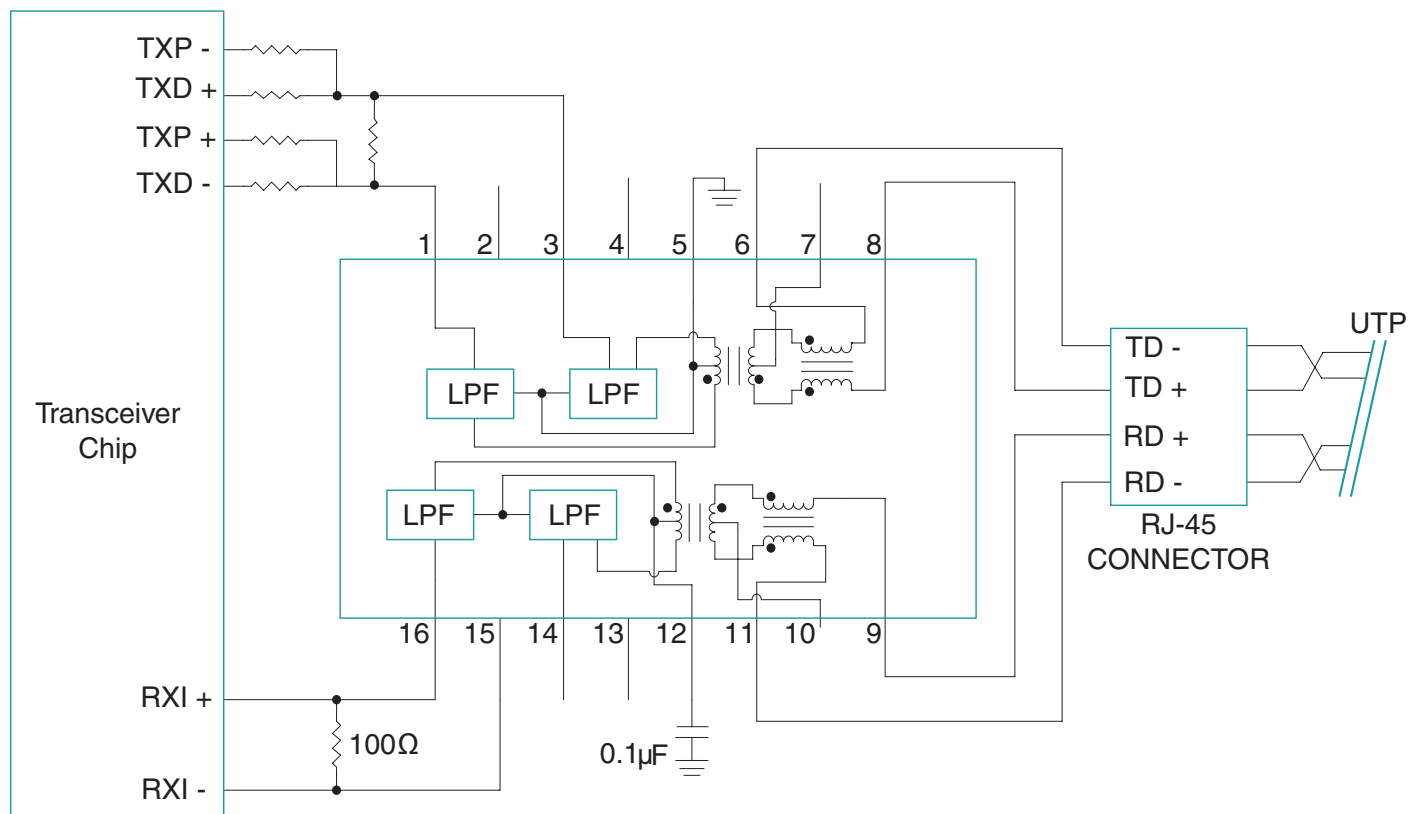
least one of these (typically pin 12) must be coupled with bypass capacitor. Recommended module orientation with respect to RJ45 connector is illustrated in the application circuit. Output pins 6 through 11 should be routed with short, matched traces to the connector for optimum EMI performance. The robust mechanical package withstands IR reflow temperatures up to 235°C. Compliant leads provide excellent solder-joint reliability with K.002 coplanarity. Modules are shipped in tubes.

Schematic



MILITARY-GRADE 10BASE-T INTERFACE MODULE

Typical Application Circuit



Note: Resistors **NOT** included in module

For More Information

**Pulse Worldwide
Headquarters**
Two Pearl Buck Court
Bristol, PA 19007
U.S.A.

Tel: 215 781 6400
Fax: 215 781 6403

Pulse Europe
Einsteinstrasse 1
D-71083 Herrenberg
Germany

Tel: 49 7032 7806 0
Fax: 49 7032 7806 135

Pulse China Headquarters
B402, Shenzhen Academy of
Aerospace Technology Bldg.
10th Kejinan Road
High-Tech Zone
Nanshan District
Shenzhen, PR China 518057
Tel: 86 755 33966678
Fax: 86 755 33966700

Pulse North China
Room 2704/2705
Super Ocean Finance Ctr.
2067 Yan An Road West
Shanghai 200336
China
Tel: 86 21 62787060
Fax: 86 21 62786973

Pulse South Asia
135 Joo Seng Road
#03-02
PM Industrial Bldg.
Singapore 368363
Tel: 65 6287 8998
Fax: 65 6287 8998

Pulse North Asia
3F, No. 198
Zhongyuan Road
Zhongli City
Taoyuan County 320
Taiwan R. O. C.
Tel: 886 3 4356768
Fax: 886 3 4356823 (Pulse)
Fax: 886 3 4356820 (FRE)

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