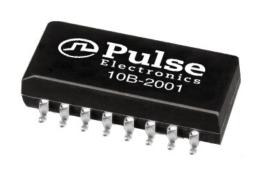
# MILITARY GRADE 10BASE-T INTERFACE MODULE





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) <sup>1</sup>	Attenuation XMIT (dB min)1			Return Loss 5 to 10 MHZ (dB min)		Crosstalk (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

0.380

16X .040

Ť.

0.225

#### NOTES:

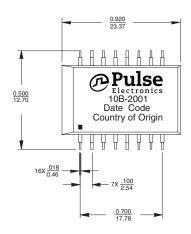
1. Receive and transmit sides meet IEEE 8023i-1993 specification, transmit side is enhanced for FCC/VDE class B system emissions requirement.

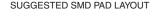
2. Specifications reflect filter sections, additional attenuation is due to pre-distortion resistors.

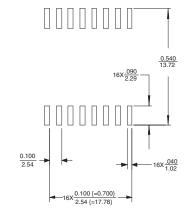
3. A RoHS compliant version part is available. (10B-2001NL)

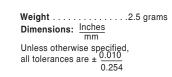
### Mechanical

10B-2001









.004

16X .040

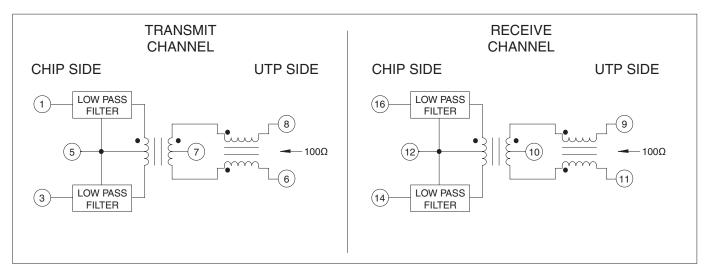
# MILITARY GRADE 10BASE-T INTERFACE MODULE



#### **Application Notes**

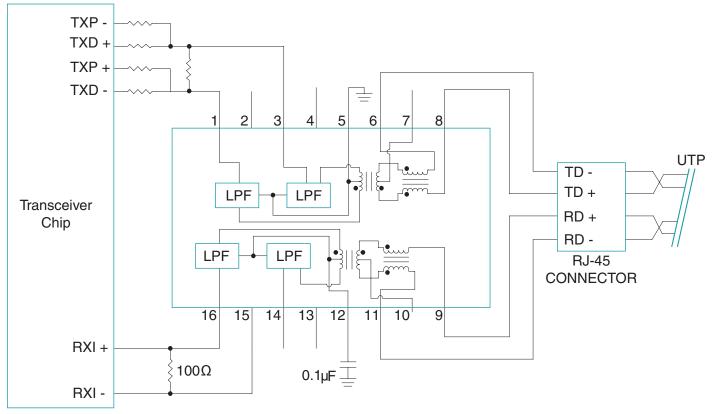
The module contains low pass filters, isolation transformers, and common mode chokes. These components provide impedance matching, equipment isolation, and EMI compression to comply with IEEE requirements. User compliance with FCC/CSPR class B requirements can be achieved by applying rigorous design 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.	Pulse Europe Einsteinstrasse 1 D-71083 Herrenberg Germany	Pulse China Headquarters B402, Shenzhen Academy of Aerospace Technology Bldg. 10th Kejinan Road High-Tech Zone Nanshan District Shenzen, PR China 518057	Pulse North China Room 2704/2705 Super Ocean Finance Ctr. 2067 Yan An Road West Shanghai 200336 China	Pulse South Asia 135 Joo Seng Road #03-02 PM Industrial Bldg. Singapore 368363	Pulse North Asia 3F, No. 198 Zhongyuan Road Zhongli City Taoyuan County 320 Taiwan R. O. C. Tel: 886 3 4356768
Tel: 215 781 6400	Tel: 49 7032 7806 0	Tel: 86 755 33966678	Tel: 86 21 62787060	Tel: 65 6287 8998	Fax: 886 3 4356823 (Pulse)
Fax: 215 781 6403	Fax: 49 7032 7806 135	Fax: 86 755 33966700	Fax: 86 2162786973	Fax: 65 6287 8998	Fax: 886 3 4356820 (FRE)

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, 2011. Pulse Electronics, Inc. All rights reserved.

M156.A (04/11)

