

# 10BASE-T NETWORK COMPONENTS

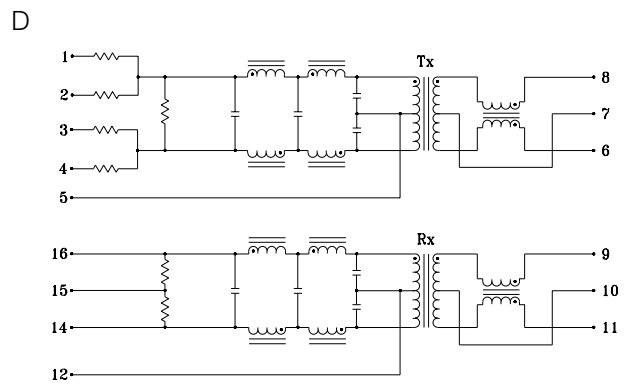
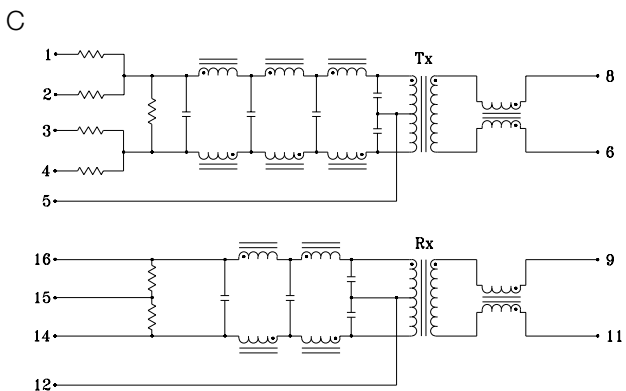
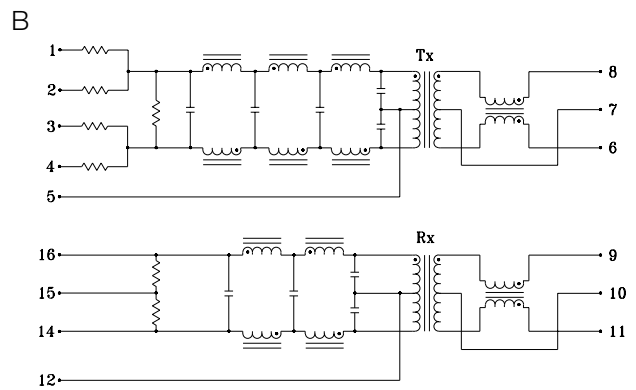
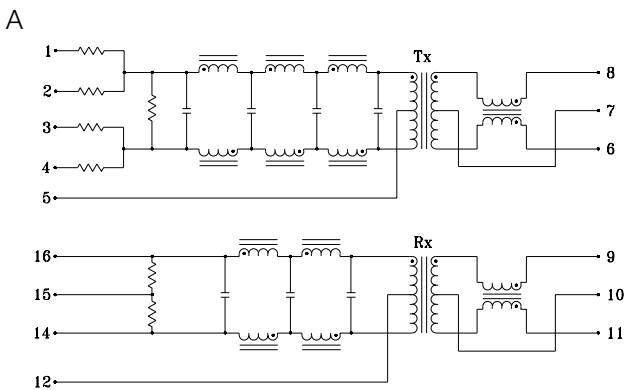
960060A

- Designed for use with a variety of National Semiconductor single port 10Base-T PHY transceivers
- All parts contain integrated impedance matching resistor networks, isolation transformers and common mode chokes
- Low profile, surface mount packaging, rated for 225°C peak IR reflow temperature
- 2000 Vrms isolation

## ELECTRICALS AT 25°C

Part No.	Insertion Loss (dB) Max 1-10MHz	Attenuation (dB) Min			Return Loss (dB) Min 5MHz-10MHz	Crosstalk (dB) Min 1MHz-10MHz	CM-CM Rej (dB) Min		Schematic	Package Style
		20MHz	25MHz	30MHz			10-30MHz	30-100MHz		
0556-2006-A5	-1.0	-7.0	-18	-28	-15	-35	-40	-30	A	1
S556-5999-27	-1.0	-7.0	-18	-28	-15	-35	-40	-30	B	2
S556-5999-47	-1.0	-7.0	-18	-28	-15	-35	-40	-30	C	2
S556-5999-48	-1.0	-7.0	-18	-28	-15	-35	-40	-30	D	2

## SCHEMATICS



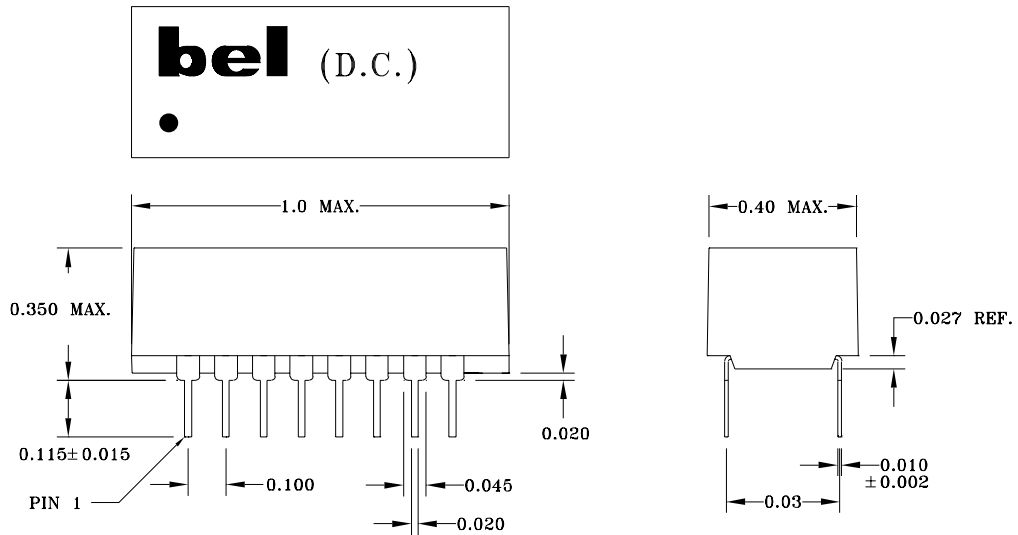
Specifications subject to change without notice.

## 10BASE-T NETWORK COMPONENTS

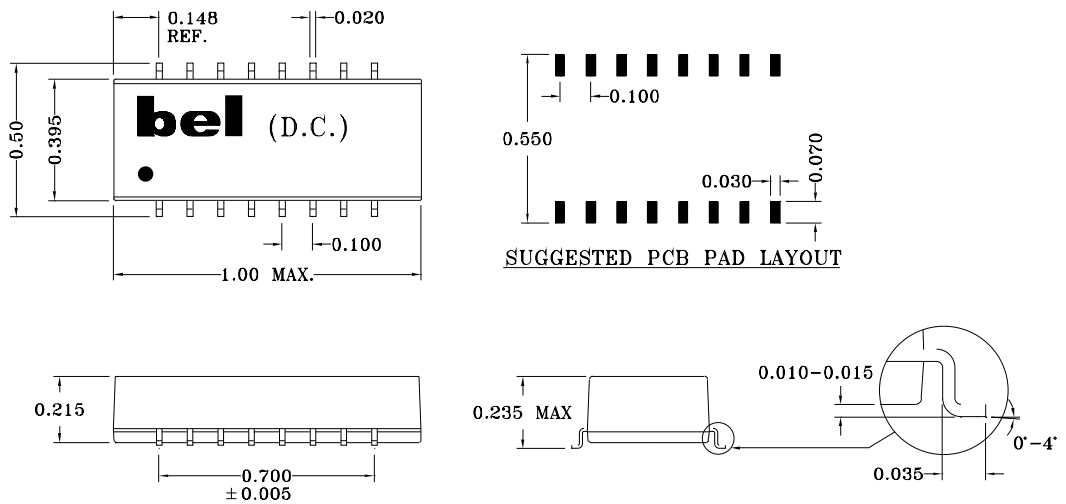
960060A

### MECHANICALS

1



2



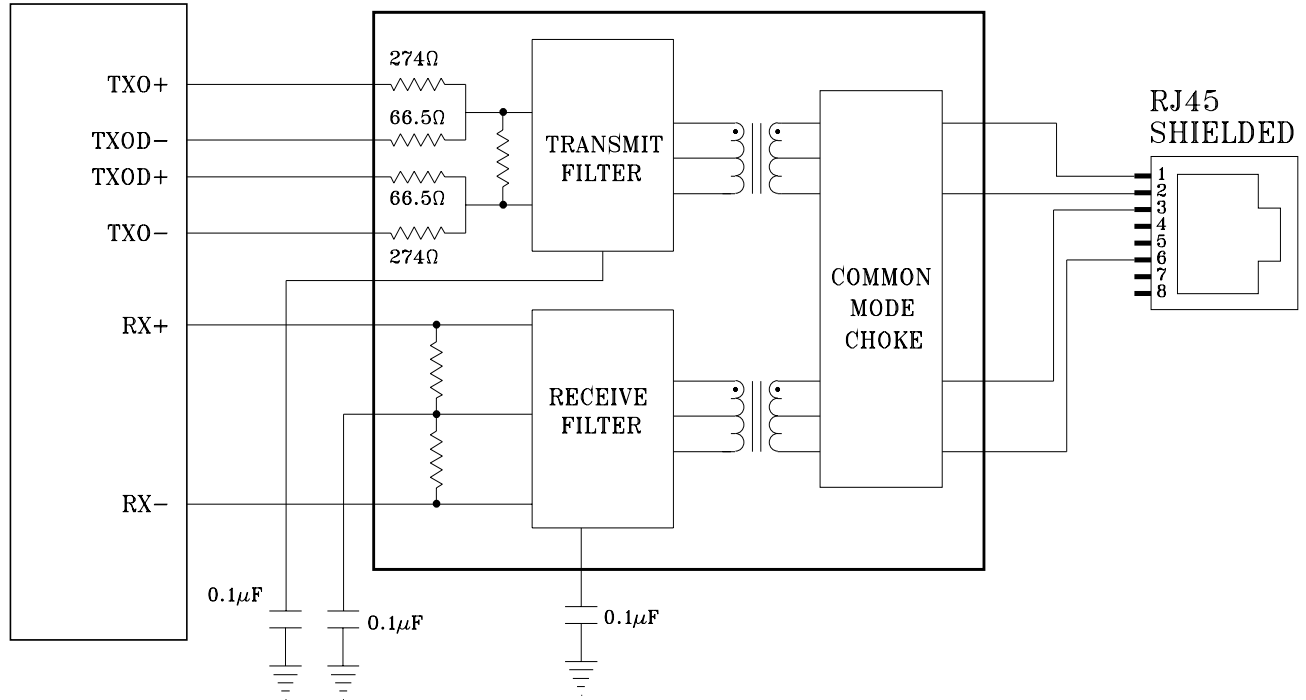
Specifications subject to change without notice.

# 10BASE-T NETWORK COMPONENTS

## APPLICATION CIRCUIT

DP83907  
10BASE-T  
INTERFACE

S556-5999-27  
S556-5999-47  
S556-5999-48



Specifications subject to change without notice.



*defining a degree of excellence*

## **10BASE-T NETWORK COMPONENTS**

**960060A**

### **APPLICATION NOTES**

---

- Refer to the Bel's short form catalog for recommended National Semiconductor chip information.
- Multiple design options offered due to different PCB layout and grounding considerations. For assistance in choosing the optimum part, please contact Bel engineering.
- Bel's low profile, surface mount packaging is ideal for high speed pick and place machinery. Parts can be shipped on tape and reel for high speed placement. Construction processes have been implemented for thermal compatibility with high temperature IR reflow assembly processing. Post dipping of leads assist with PC board solderability. Each part is optically inspected to meet rigid coplanarity requirements.
- Bel's surface mount 10Base-T network component filter modules provide the complete solution as the interface module between the IC transceiver chip and the media side connector. Designed within each module are transmit and receive filter networks, high voltage isolation transformers and high performance EMI suppression common mode chokes. Each module fully meets the IEEE 802.3 standards for 10 Mbps data rates over 100 meters of media cable.
- All of these part types have been designed to provide signal performance optimization, maximum noise reduction and minimum crosstalk interference. Careful board layout and grounding techniques are also critical to control jitter and signal reflections.

---

#### **Corporate Office**

**Bel Fuse Inc.**  
198 Van Vorst Street, Jersey City, NJ 07302-4496  
Tel: 201-432-0463  
Fax: 201-432-9542  
E-Mail: [BelFuse@belfuse.com](mailto:BelFuse@belfuse.com)  
Internet: <http://www.belfuse.com>

#### **Far East Office**

**Bel Fuse Ltd.**  
8F/8 Luk Hop Street  
San Po Kong  
Kowloon, Hong Kong  
Tel: 852-2328-5515  
Fax: 852-2352-3706

#### **European Office**

**Bel Fuse Europe Ltd.**  
Preston Technology Management Centre  
Marsh Lane, Preston PR1 8UD  
Lancashire, U.K.  
Tel: 44-1772-556601  
Fax: 44-1772-888366