

# 10BASE-T NETWORK COMPONENTS

960049A

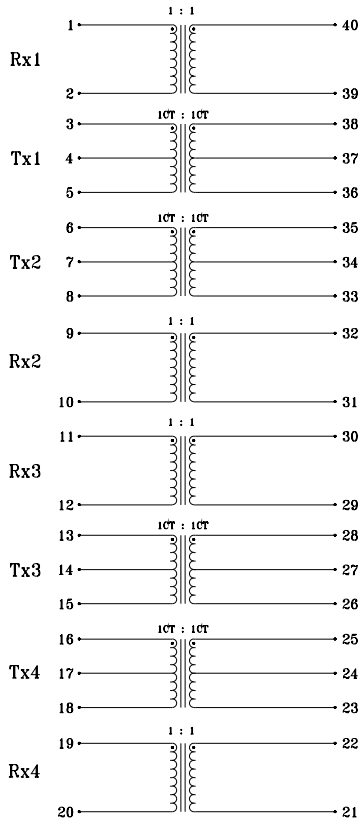
- Designed for use with AMD multi-port 10Base-T transceiver chipsets, such as the eIMR (79C984A), eIMR+ (79C985) and QuiET (79C988)/IMR2 (79C983) where digital filtering has been incorporated into the silicon
- Filterless quad, 4-port designs with common configuration offering choice of customized EMI performance and grounding techniques
- Quad design offers best space and cost efficiency per port
- Low profile, surface mount packaging, rated to 225°C peak IR reflow temperature
- 2000 Vrms isolation

## ELECTRICALS AT 25°C

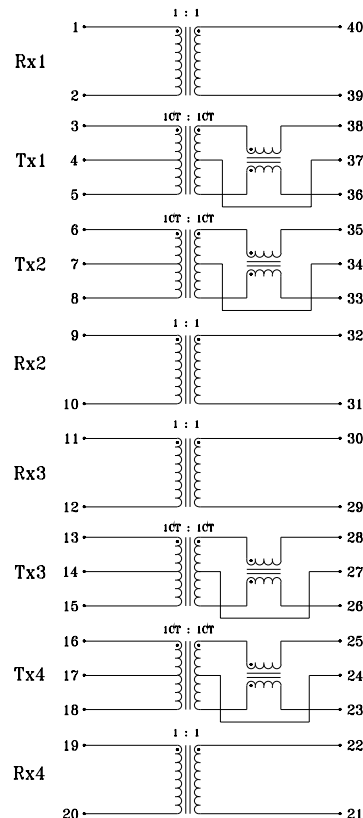
Part No.	Insertion Loss (dB) Max 1-10MHz	Return Loss (dB) Min 5MHz-10MHz	Crosstalk (dB) Min 5MHz-10MHz	CM-CM Rej (dB) Min			Schematic	
				5-10MHz	50MHz	100MHz		
S553-5999-18	-1.0	-20	-50	-50	-35	-25	-20	A
S553-5999-23	-1.0	-20	-50	-50	-35	-25	-20	B
S553-5999-24	-1.0	-20	-50	-50	-35	-25	-20	C
S553-5999-39	-1.0	-20	-50	-50	-35	-25	-20	C

## SCHEMATICS

A



B



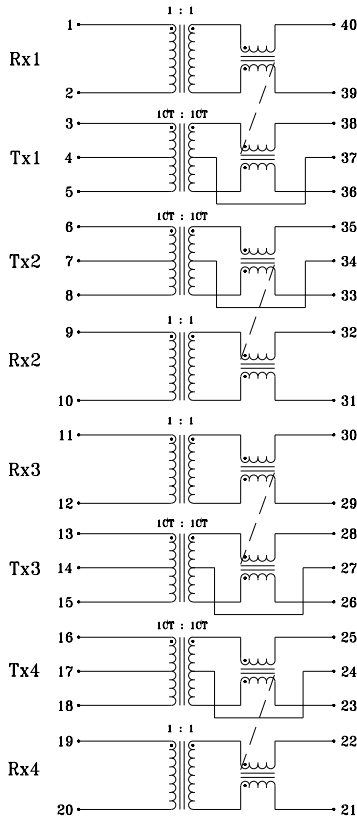
Specifications subject to change without notice.

## 10BASE-T NETWORK COMPONENTS

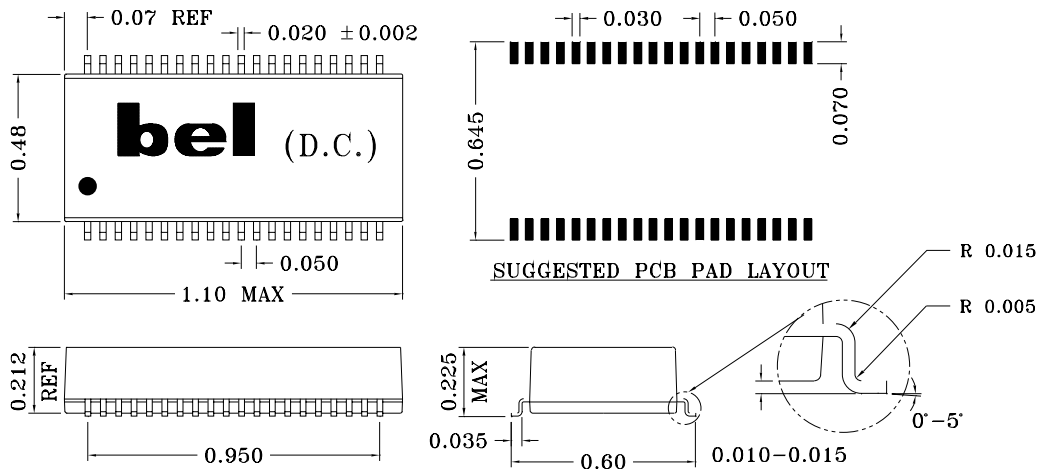
960049A

### SCHEMATICS (CONT'D)

C



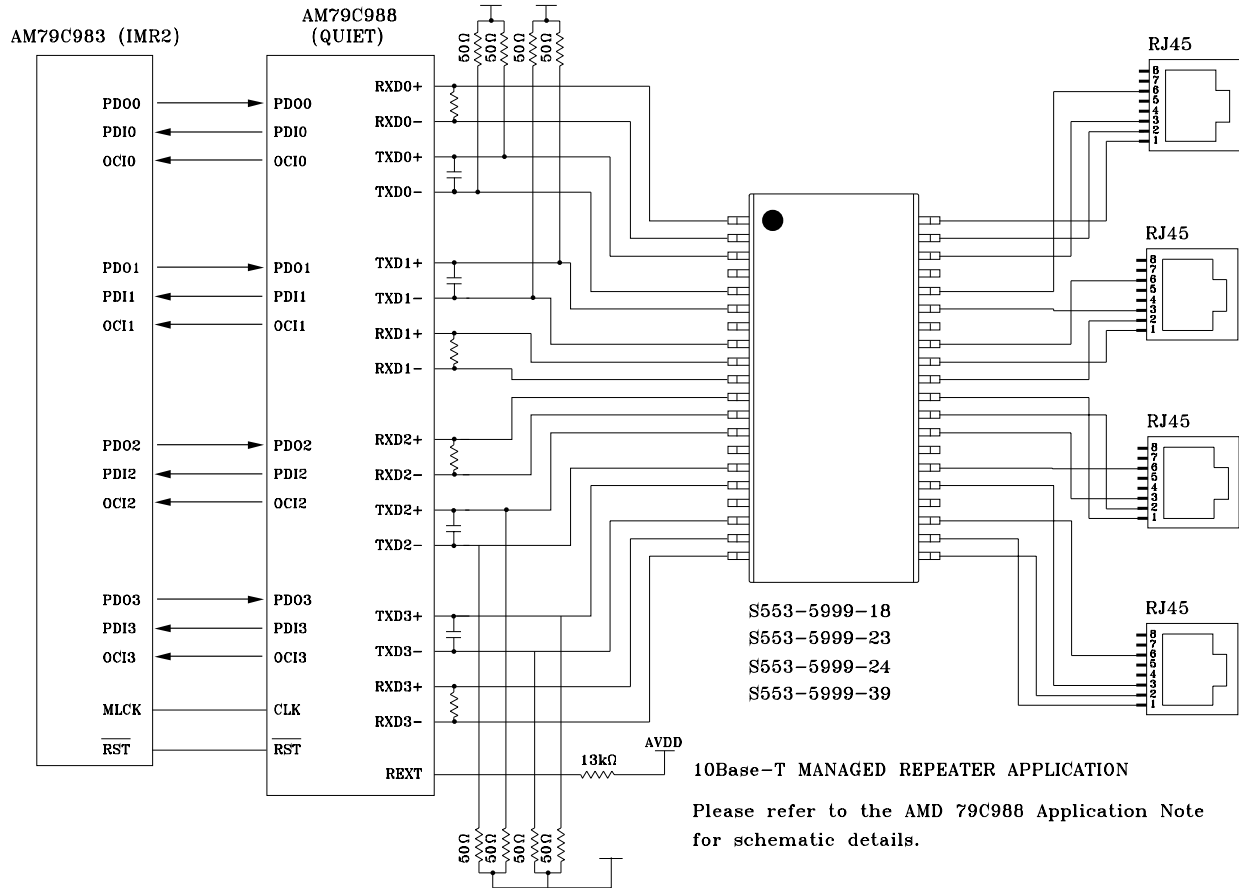
### MECHANICAL



Specifications subject to change without notice.

# 10BASE-T NETWORK COMPONENTS

## APPLICATION CIRCUIT



Specifications subject to change without notice.



defining a degree of excellence

## 10BASE-T NETWORK COMPONENTS

960049A

### APPLICATION NOTES

---

- Bel has developed these part types for use with AMD's product line of quad, 4-port PHY devices that incorporate digital filtering techniques within the silicon itself. Bel's "filterless magnetics" are optimized for this specific application and create a very cost efficient design solution. Each Bel part type contains 4 channels of transmit and receive transformers to provide for wave shaping, high voltage isolation and EMI noise suppression. In certain applications, additional differential filtering may be required to comply with IEEE 802.3 standards.
- Bel has designed these parts as a family of parts with common footprint and pinouts to enable the designer to customize the use of common mode choke for optimum system performance.
- In multi-port system applications, good PCB layout and proper grounding techniques are very critical to achieve FCC class A and B equipment approvals. Bel recommendations are available and can be provided by contacting our engineering department or your local sales representative.
- 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.
- The specific configuration of these Bel parts (Rx-Tx-Tx-Rx-Rx-Tx-Tx-Rx) is optimal for use with stacked or "double decker" RJ-45 connectors. This configuration should provide short and straight traces to the output connectors.

---

#### *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