

# 10BASE-T NETWORK COMPONENTS

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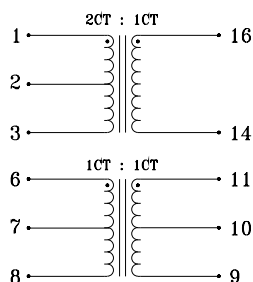
- Designed for use with Seeq 80C24-26 and 83C95-96 10Base-T PHY transceivers
- Single and dual port designs available with and without common mode chokes
- Conforms to IEEE 802.3 standards
- Through-hole and surface mount packaging
- 2000 Vrms isolation

## ELECTRICALS AT 25°C

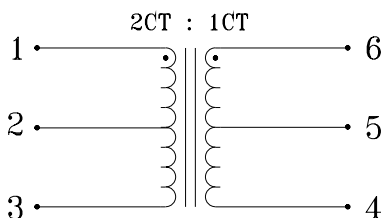
| Part No.     | Turns Ratio (transmit) | Insertion Loss (dB) Max 1-10MHz | OCL (μH) Min | Return Loss (dB) Min 5-10MHz | Crosstalk (dB) Min 1MHz-10MHz | CM-CM Rej (dB) Min 10-30MHz | CM-CM Rej (dB) Min 100MHz | Schematic | Package Style |
|--------------|------------------------|---------------------------------|--------------|------------------------------|-------------------------------|-----------------------------|---------------------------|-----------|---------------|
| A553-1084-01 | 2CT:1                  | -1.0                            | 80           | -18                          | -40                           | N/A                         | N/A                       | A         | 1             |
| S553-1084-01 | 2CT:1                  | -1.0                            | 80           | -18                          | -40                           | N/A                         | N/A                       | A         | 2             |
| S553-1084-05 | 2CT:1CT                | -1.0                            | 200          | -18                          | -40                           | N/A                         | N/A                       | B         | 3             |
| S553-1084-06 | 2CT:1                  | -1.0                            | 80           | -18                          | -40                           | -40                         | -30                       | C         | 2             |
| S553-1084-11 | 2CT:1CT                | -1.0                            | 80           | -18                          | -40                           | N/A                         | N/A                       | D         | 2             |
| S553-1084-16 | 2CT:1CT                | -1.0                            | 80           | -18                          | -40                           | -40                         | -30                       | E         | 2             |

## SCHEMATICS

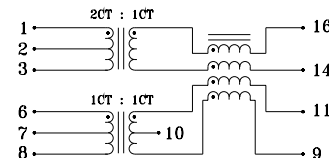
A



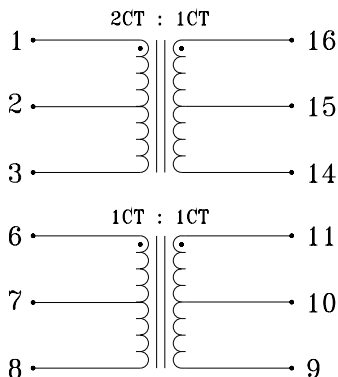
B



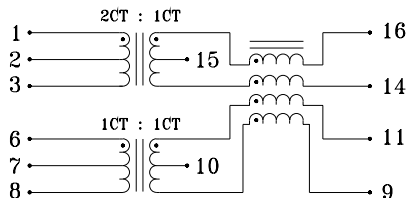
C



D



E



### 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

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



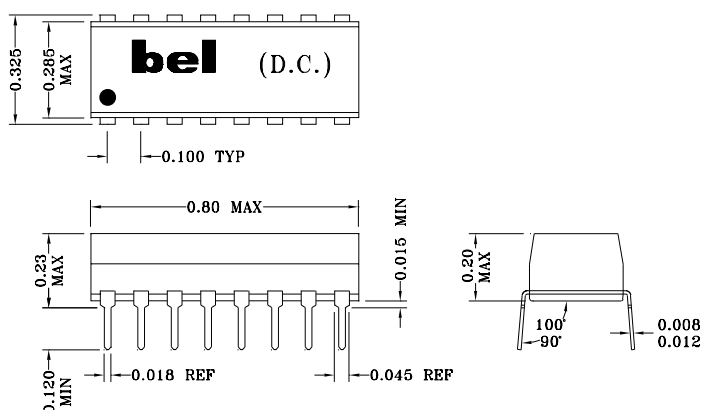
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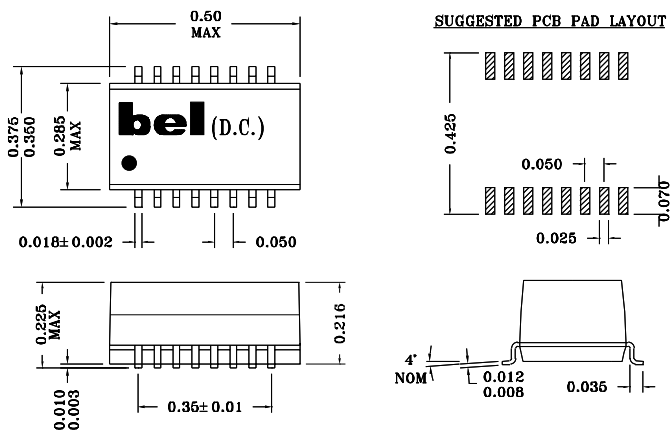
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### MECHANICALS

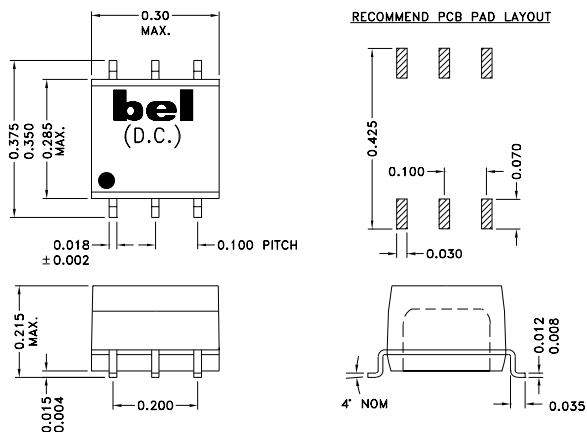
1



2



3



Specifications subject to change without notice.

The diagram illustrates the internal wiring of an Ethernet transceiver module. It features a central transceiver chip, labeled "SEEQ 80C25 OR 80C26".

- Left Side (Ethernet Transceiver Module):**
  - Inputs: TX+, TX+, TX+, TX+, TX+, TX+, TX+, TX+.
  - Outputs: DO+, DO-, CI+, CI-, DI+, DI-.
  - Control pins: CDS, RXI, TXO.
- Central Transceiver (SEEQ 80C25 OR 80C26):**
  - Pin 26: REXT (connected to Vcc via a 200Ω resistor).
  - Pin 25: TP0+.
  - Pin 24: TP0-.
  - Pin 23: TP1+.
  - Pin 22: TP1-.
- Right Side (RJ45 Shielded Connector):**
  - Inputs: TD+, CT+, TD-, RD+, CT, RD-.
  - Outputs: TX+, TX-, RX+, RX-.
- Bottom Connections:**
  - A 10KΩ resistor connects the TP1+ pin to ground.
  - A 0.1μF capacitor connects the TP1- pin to ground.
  - A 0.1μF capacitor connects the TP0- pin to ground.
  - A 0.1μF capacitor connects the TP0+ pin to ground.

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### APPLICATION NOTES

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- All receive transformers (except for S553-1084-05) have 1CT:1CT turns ratio.
- Multiple design options offered to optimize individual PCB layouts and grounding configurations. Consult Bel engineering for assistance in choosing the best solution.
- 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.

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