

# 10BASE-T NETWORK COMPONENTS

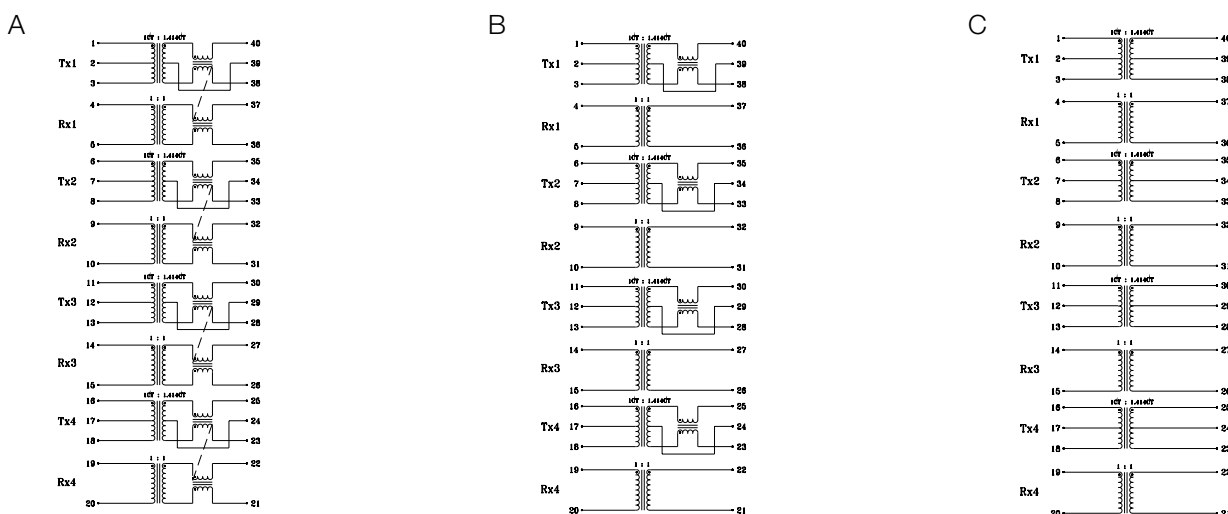
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- Designed for use with Crystal Semiconductor C88904 10Base-T PHY transceiver chipset
- Family of design options offered with common footprints and pinouts to offer optimized EMI suppression
- Quad, 4-port designs to maximize cost and board space efficiencies
- Low profile, surface mount packaging, rated to 225°C peak IR reflow temperature
- 2000 Vrms isolation

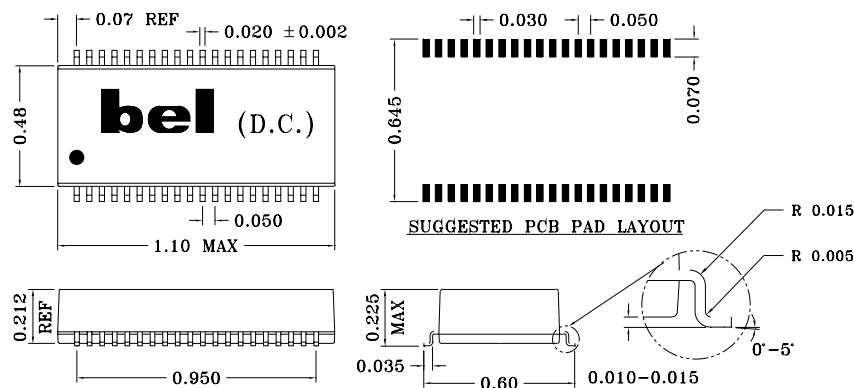
## ELECTRICALS AT 25°C

| Part No.     | Insertion Loss<br>(dB) Max<br>1-10MHz | OCL<br>( $\mu$ H) Min<br>TX/RX | Return Loss<br>(dB) Min<br>5MHz-10MHz | Crosstalk<br>(dB) Min<br>1MHz-10MHz | CM-CM Rej<br>(dB) Min |           | Schematic |
|--------------|---------------------------------------|--------------------------------|---------------------------------------|-------------------------------------|-----------------------|-----------|-----------|
|              |                                       |                                |                                       |                                     | 10-30MHz              | 30-100MHz |           |
| S553-5841-17 | -1.0                                  | 140/200                        | -15                                   | -35                                 | -40                   | -30       | A         |
| S553-5841-18 | -1.0                                  | 140/200                        | -15                                   | -35                                 | -40                   | -30       | B         |
| S553-5841-30 | -1.0                                  | 140/200                        | -15                                   | -35                                 | -40                   | -30       | C         |

## SCHEMATICS



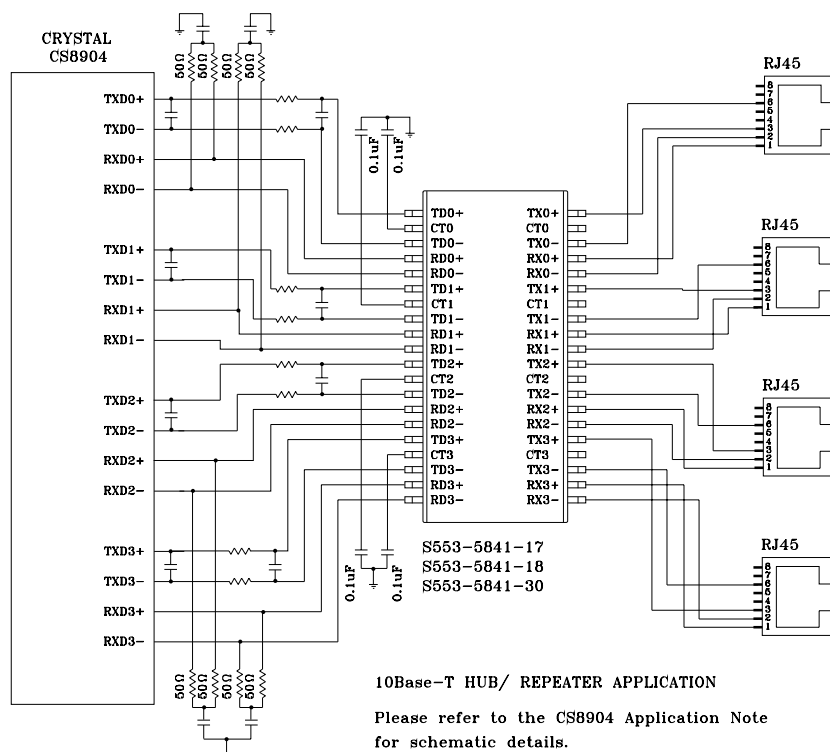
## MECHANICAL



Specifications subject to change without notice.

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## APPLICATION CIRCUIT



## APPLICATION NOTES

- Bel has developed a variety of quad, 4-port part types for use with Crystal Semiconductor's product line of quad, 4-port PHY transceivers 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 transmit and receive transformers to provide for wave shaping, high voltage isolation and EMI noise suppression.
- 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.

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