

## VOICE OVER IP MAGNETICS

### Broadband Transformers

LM00200

- Support 10 Mbps and 100 Mbps VoIP applications
- Compliant with IEEE 802.3 standards
- Designed to meet 350mA balanced DC line current
- 350μH OCL with 8mA bias applied from 0° to 70° C
- Minimum interwinding breakdown voltage of 1500 Vrms

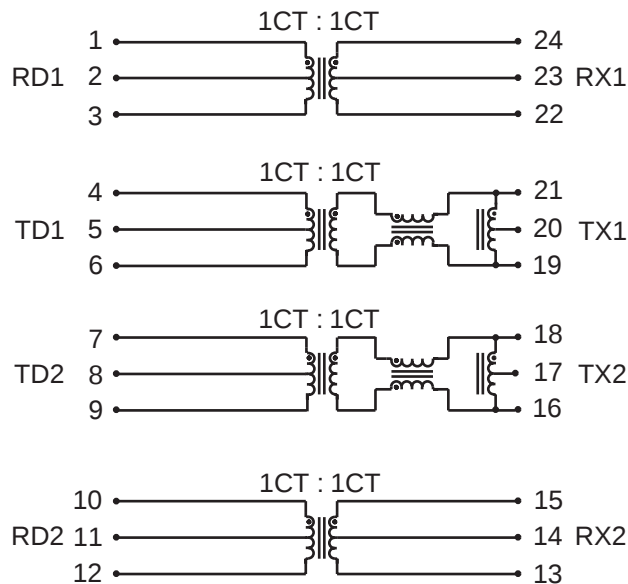
### ELECTRICAL SPECIFICATIONS AT 25° C

| Part Number  | Turns Ratio<br>±3% |            | Primary Inductance<br>μH min | Leakage Inductance<br>μH max | Interwinding Capacitance<br>pF max | DCR<br>Ω max |     |      |     |
|--------------|--------------------|------------|------------------------------|------------------------------|------------------------------------|--------------|-----|------|-----|
|              | TXIN : TXO         | RXIN : RXO |                              |                              |                                    | TXIN         | TXO | RXIN | RXO |
| S558-5500-02 | 1CT : 1CT          | 1CT : 1CT  | 350                          | 0.25                         | 25                                 | 1.0          | 1.0 | 1.0  | 1.0 |
| S558-5500-04 | 1CT : 1CT          | 1CT : 1CT  | 350                          | 0.25                         | 25                                 | 1.0          | 1.0 | 1.0  | 1.0 |
| S558-5500-12 | 1CT : 1CT          | 1CT : 1CT  | 350                          | 0.25                         | 25                                 | 1.0          | 1.0 | 1.0  | 1.0 |
| S558-5500-16 | 1CT : 1CT          | 1CT : 1CT  | 350                          | 0.25                         | 40                                 | 1.0          | 1.4 | 1.0  | 1.4 |

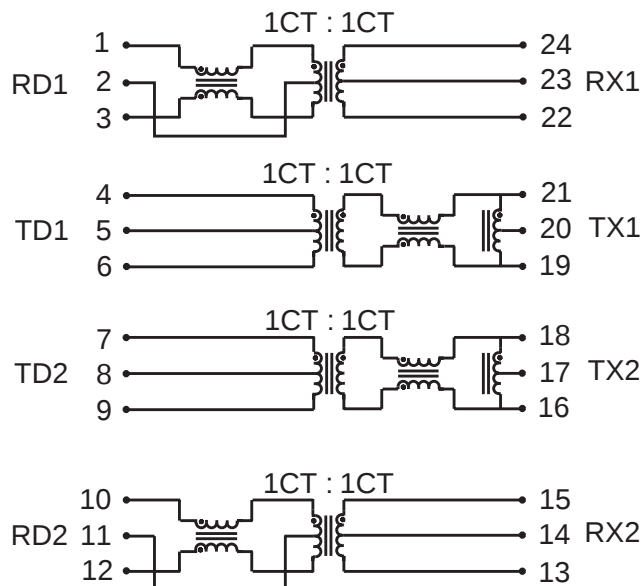
| Part Number  | Insertion Loss<br>dB min | Return Loss<br>dB min |                | Crosstalk<br>dB min |       |       |        | Common to Differential Mode Rejection<br>dB min | Common to Common Mode Rejection<br>dB min |
|--------------|--------------------------|-----------------------|----------------|---------------------|-------|-------|--------|-------------------------------------------------|-------------------------------------------|
|              | 100kHz to 100MHz         | 2MHz to 30MHz         | 60MHz to 80MHz | 1MHz                | 30MHz | 60MHz | 100MHz | 100kHz to 100MHz                                |                                           |
| S558-5500-02 | -1.5                     | -16                   | -10            | -65                 | -60   | -50   | -45    | -45                                             | -45                                       |
| S558-5500-04 | -1.5                     | -16                   | -10            | -65                 | -60   | -50   | -45    | -45                                             | -45                                       |
| S558-5500-12 | -1.5                     | -16                   | -10            | -65                 | -60   | -50   | -45    | -45                                             | -45                                       |
| S558-5500-16 | -1.5                     | -16                   | -10            | -65                 | -60   | -50   | -45    | -45                                             | -45                                       |

#### SCHEMATIC

S558-5500-02  
S558-5500-04



S558-5500-12



1CT : 1CT

1 2 3 24 23 22

1CT : 1CT

4 5 6 21 20 19

1CT : 1CT

7 8 9 18 17 16

1CT : 1CT

10 11 12 15 14 13

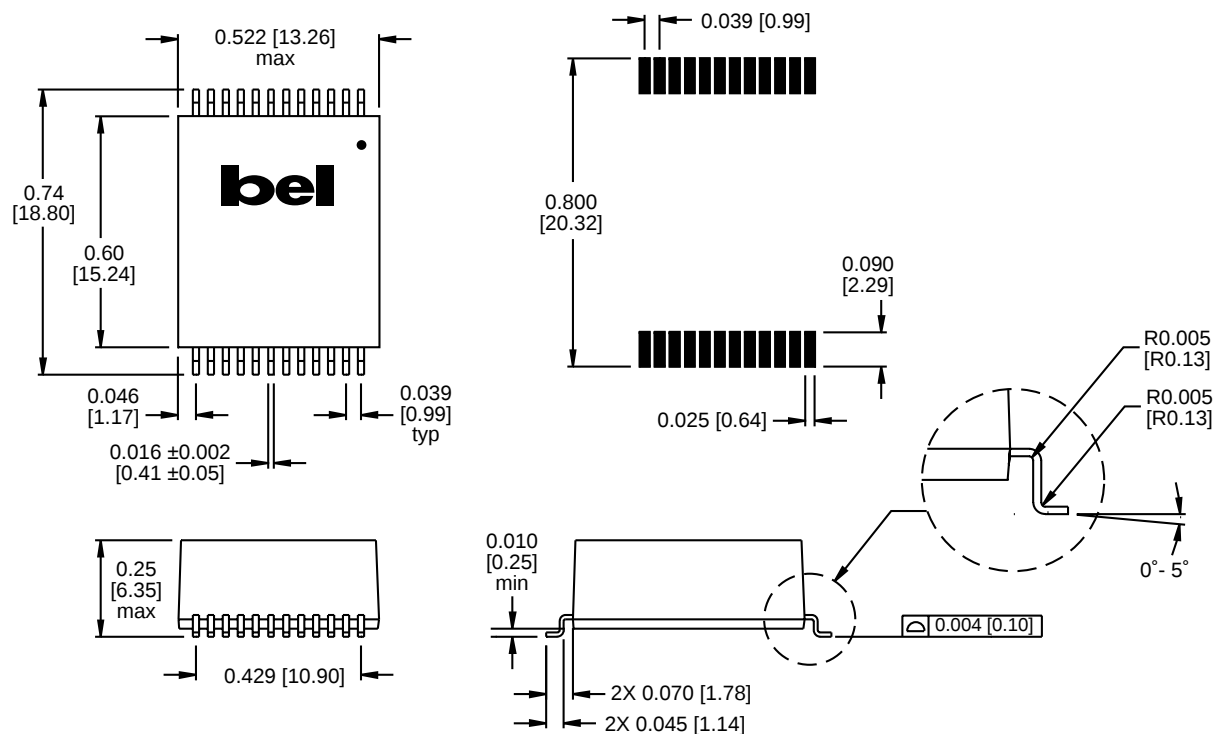
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## MECHANICAL

S558-5500-04  
S558-5500-12  
S558-5500-16

### Suggested PCB Pad Layout



Dimensions are in inches [millimeters].  
Standard dimension tolerance is  $\pm 0.005$  [0.13] unless otherwise noted.

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