

# HIGH FREQUENCY MAGNETICS

## T1/E1 Octal Transformer Modules



TM01119

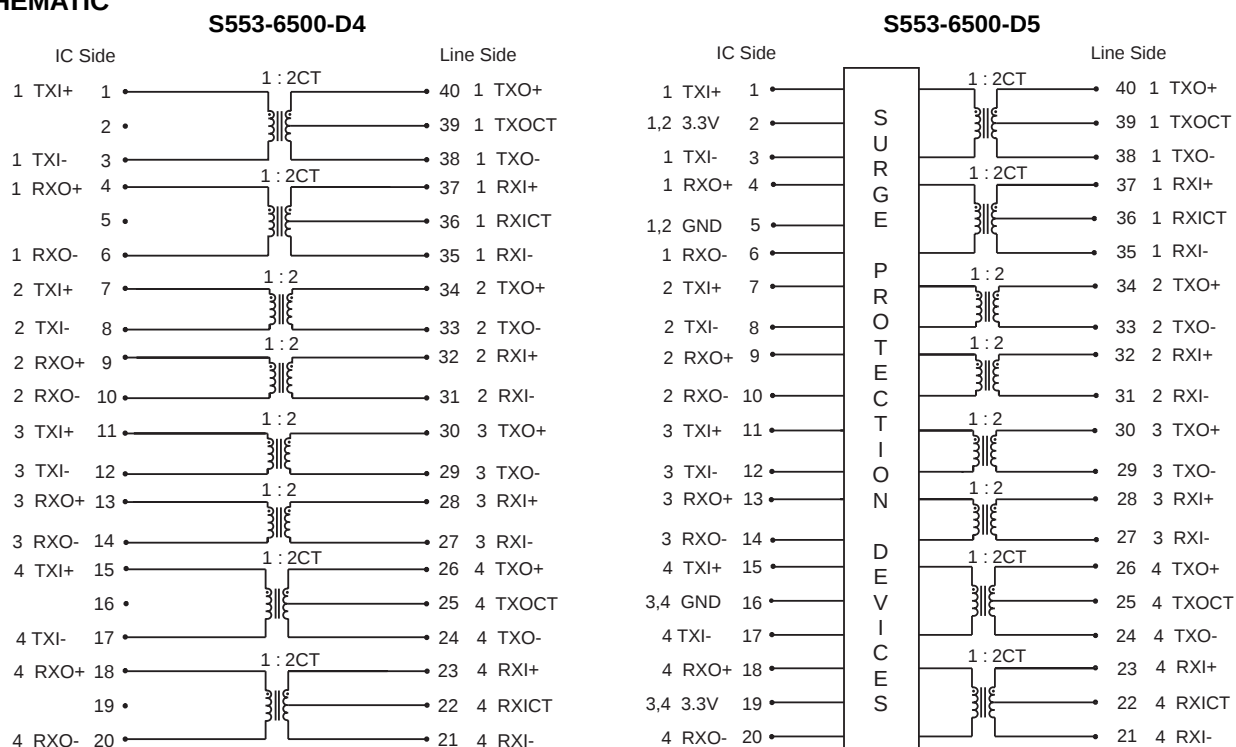
- Optimized for line interface devices listed on next page
- Operating temperature range -40° to +85°C
- Eight transformers in one surface mount package
- Meets IEC 695, 2-2 flammability requirements
- Two modules:  
S553-6500-D4 with 8 transformers  
S553-6500-D5 with 8 transformers and IC surge protection devices
- PWB Process Capability: standard printed wiring board assembly techniques, total-immersion cleaning
- Reliability testing: Shock, vibration, temperature cycling, temperature - humidity - bias
- Four transformers have center taps to facilitate Simplex line powering
- Interwinding breakdown voltage: 1500 Vrms min
- Meets ITU-T G.703 return loss from -40° to +85° C
- UL 1950 approved: file number E150991

### ELECTRICAL SPECIFICATIONS at 25° C

| Part Number  | Turns Ratio<br>±2% |       | Primary Inductance<br>at 10 kHz |     | Leakage Inductance<br>at 1 MHz |     | DCR<br>Ω max |     |           |     | Capacitance<br>pF max | Return Loss at 102 kHz<br>120Ω Application <sup>1</sup> |    |                         |    |
|--------------|--------------------|-------|---------------------------------|-----|--------------------------------|-----|--------------|-----|-----------|-----|-----------------------|---------------------------------------------------------|----|-------------------------|----|
|              | IC : Line          |       | mH min                          |     | μH max                         |     | IC Side      |     | Line Side |     | Winding to Winding    | 25° C<br>dB typ                                         |    | -40 to +85° C<br>dB min |    |
|              | TX                 | RX    | TX                              | RX  | TX                             | RX  | TX           | RX  | TX        | RX  |                       | TX                                                      | RX | TX                      | RX |
| S553-6500-D4 | 1 : 2              | 1 : 2 | 1.2                             | 1.2 | 0.3                            | 0.3 | 0.6          | 0.6 | 1.2       | 1.2 | 35                    | 16                                                      | 22 | 15                      | 20 |
| S553-6500-D5 | 1 : 2              | 1 : 2 | 1.2                             | 1.2 | 0.3                            | 0.3 | 0.6          | 0.6 | 1.2       | 1.2 | 35                    | 16                                                      | 22 | 15                      | 20 |

1. Terminated in 36 Ω for TX and 27 Ω for RX

### SCHEMATIC



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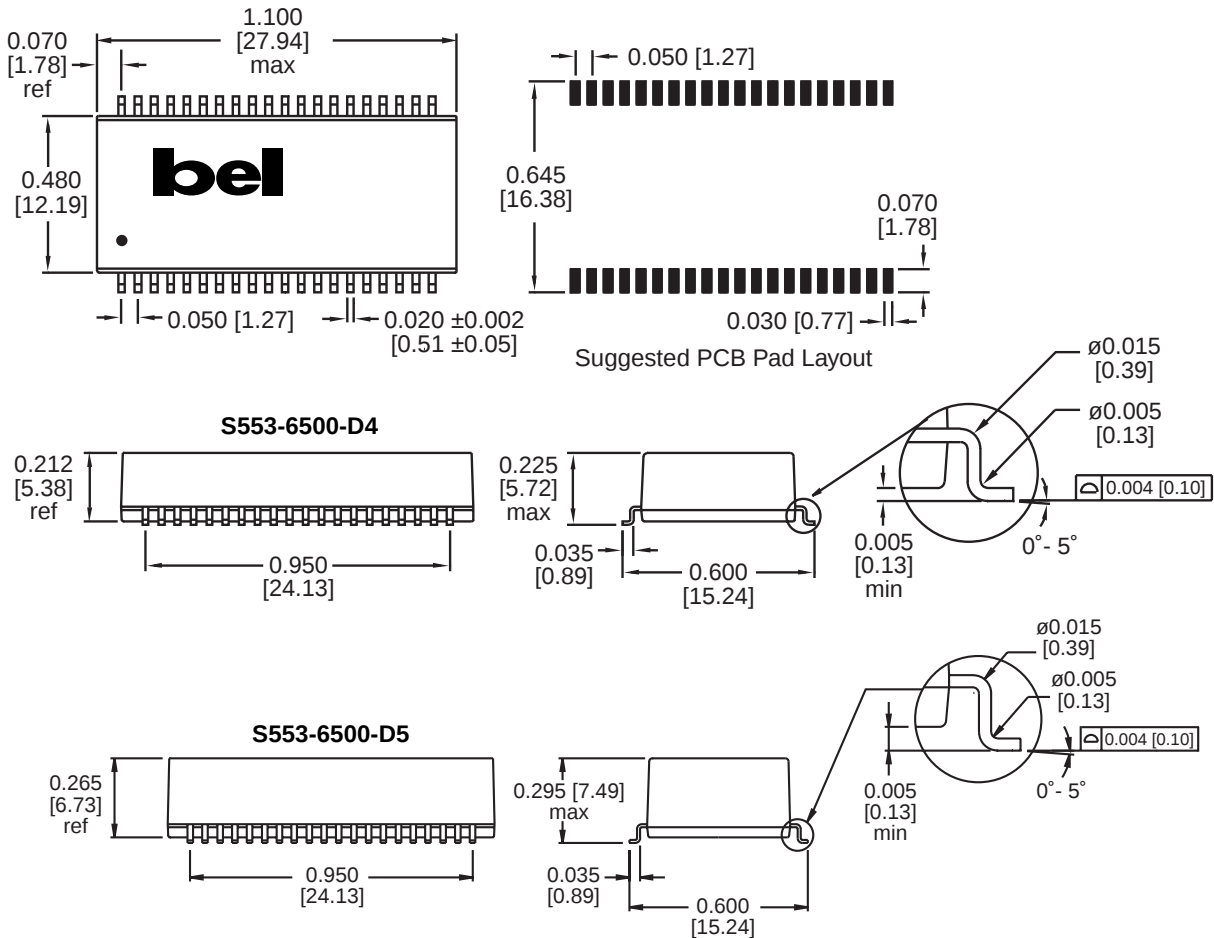
### T1/E1 Octal Transformer Modules

#### MECHANICAL

Meets or exceeds all circuit requirements for:

PMC Sierra PM4318  
Intel LXT384, LXT386  
Conexant CN8380  
Exar XRT5997, XRT81L27, XRT82L24, XRT82L34, XRT82L38

#### S553-6500-D4 and S553-6500-D5



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

#### S553-6500-D5 Surge Protection Devices

TVS Diode Array: Semtech SRDA3.3-4

Number of arrays: 4

**Note:** Surge protection provided by the Bel module is equivalent to that advertised in the Semtech SRDA3.3-4 product specification.

#### Tape and Reel Packaging

44 mm wide by 24 mm pitch; 13 inch OD, 6 inch ID

200 modules per reel, maximum

Meets ANSI/EIA 481-2 Carrier Tape Standards - JEDEC SO Package

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