

# HIGH FREQUENCY MAGNETICS

## T1/E1 Octal Transformer Modules

TM01108

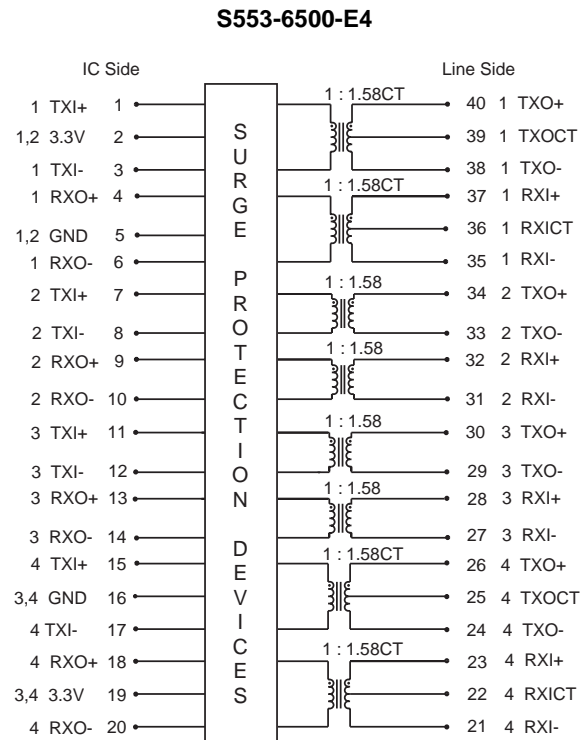
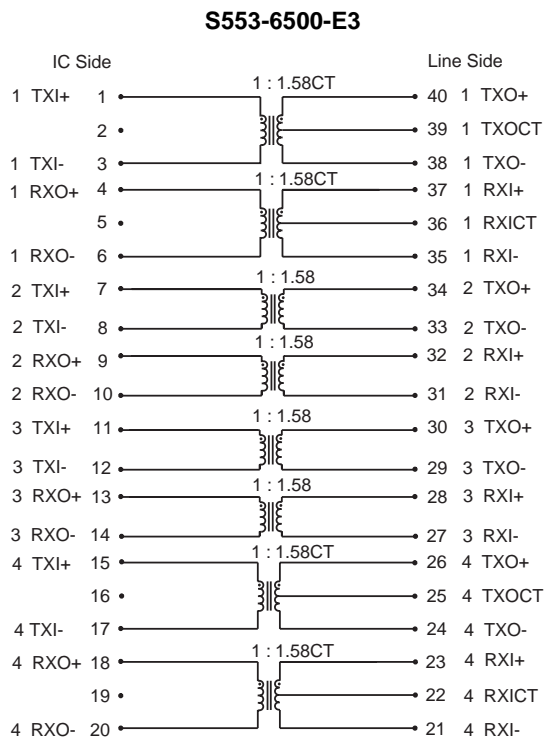
- Optimized for PMC-Sierra PM4318, 75Ω option
- Eight transformers in one surface-mount package
- Two modules:  
S553-6500-E3 with eight transformers  
S553-6500-E4 with eight transformers and IC-side surge protection devices
- Four transformers have center taps to facilitate Simplex line powering
- Meets ITU-T G.703 return loss from -40° to +85° C
- Operating temperature range -40° to +85° C
- Meets IEC 695, 2-2 flammability requirements
- PWB Process Capability: standard printed wiring board assembly techniques, total-immersion cleaning
- Reliability testing: Shock, vibration, temperature cycling, temperature - humidity - bias
- Interwinding breakdown voltage: 1500 Vrms min
- UL 1950 approved: S553-6500-E3 file number E150991  
S553-6500-E4 pending

### ELECTRICAL SPECIFICATIONS at 25° C

Part Number	Turns Ratio ±2%		Primary Inductance at 10 kHz		Leakage Inductance at 1 MHz		DCR Ω max				Capacitance pF max	Return Loss at 102 kHz 75Ω Application <sup>1</sup>			
	IC : Line		μH min		μH max		IC Side		Line Side		Winding to Winding	25° C dB typ		-40 to +85° C dB min	
	TX	RX	TX	RX	TX	RX	TX	RX	TX	RX		TX	RX	TX	RX
S553-6500-E3	1 : 1.58	1 : 1.58	950	950	0.3	0.3	0.6	0.6	0.8	0.8	35	20	27	18	23
S553-6500-E4	1 : 1.58	1 : 1.58	950	950	0.3	0.3	0.6	0.6	0.8	0.8	35	20	27	18	23

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

### SCHEMATIC

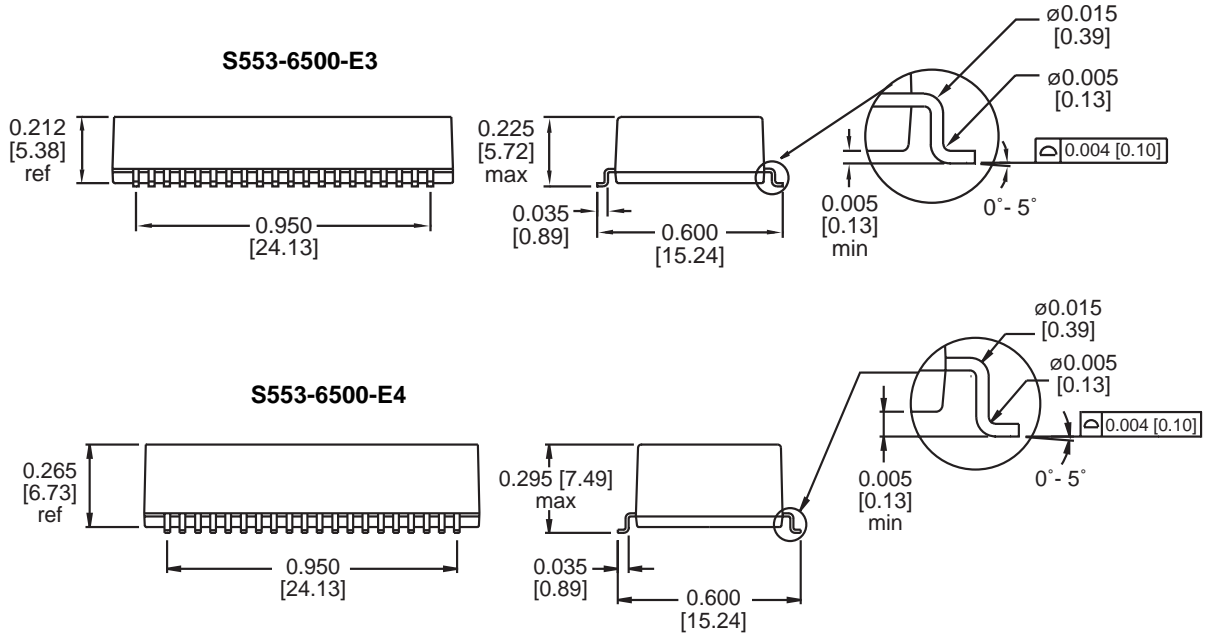
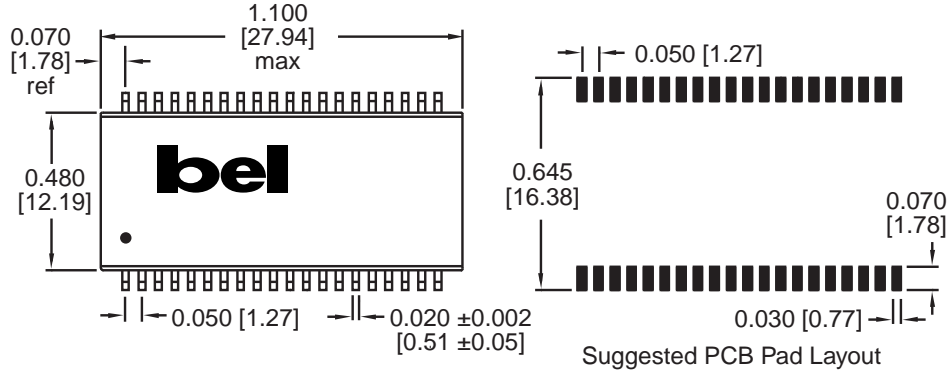


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#### MECHANICAL

S553-6500-E3  
S553-6500-E4



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

#### S553-6500-E4 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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