

# HIGH FREQUENCY MAGNETICS

## T1/E1 Octal Transformer Modules

TM01109

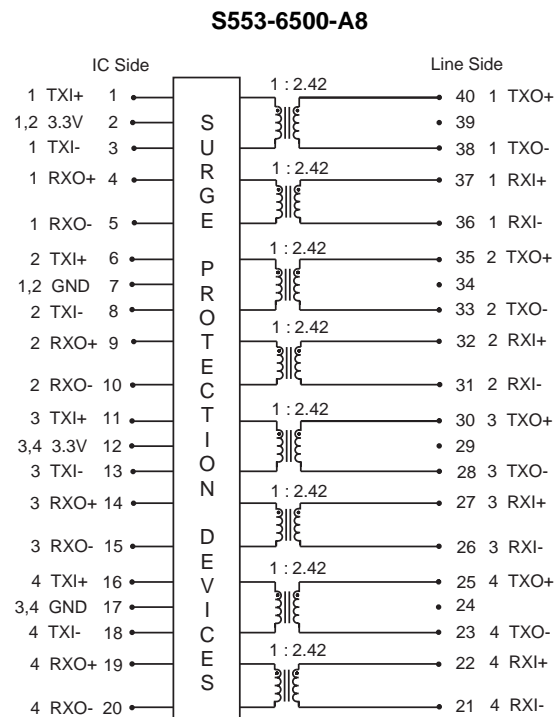
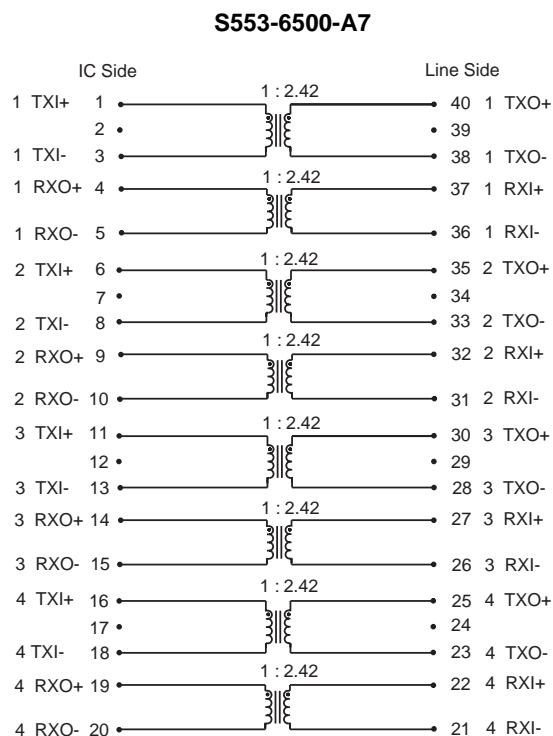
- Optimized for PMC-Sierra PM4354 Quad COMET
- Eight transformers in one surface-mount package
- Two modules:  
S553-6500-A7 with eight transformers  
S553-6500-A8 with eight transformers and IC-side surge protection devices
- Tight ratio tolerance assists impedance matching
- Meets ITU-T G.703 return 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-A7 file number E150991  
S553-6500-A8 pending

### ELECTRICAL SPECIFICATIONS at 25° C

Part Number	Turns Ratio ±2% IC : Line		Primary Inductance <sup>1</sup> µH min	Leakage Inductance <sup>1</sup> µH max	DCR Ω max		Interwinding Capacitance pF max	Return Loss at 102 kHz 120Ω Application <sup>2</sup>			
	TX	RX	IC Side	IC Side	IC Side	Line Side		25° C dB typ		-40 to +85° C dB min	
								TX	RX	TX	RX
S553-6500-A7	1 : 2.42	1 : 2.42	950	0.3	0.6	1.3	35	18	27	17	24
S553-6500-A8	1 : 2.42	1 : 2.42	950	0.3	0.6	1.3	35	18	27	17	24

1. Inductance at 10 kHz, leakage inductance at 1 MHz
2. Terminated in 25.4 Ω for TX and 18.2 Ω for RX

### SCHEMATIC

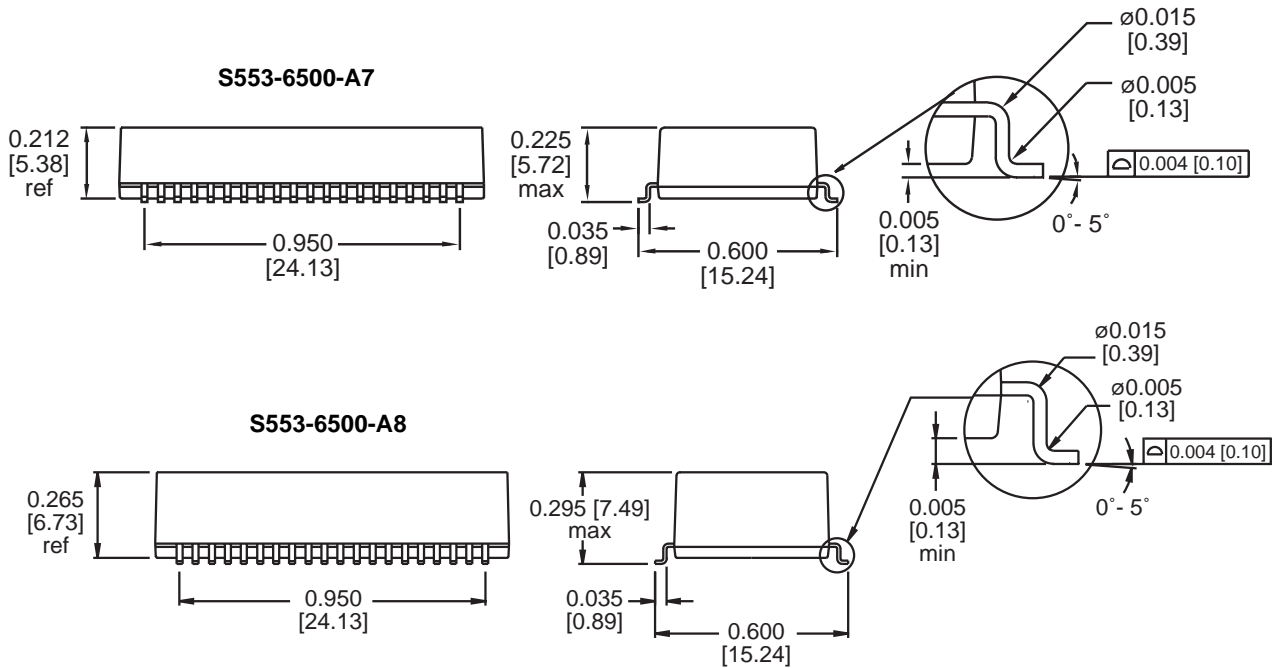
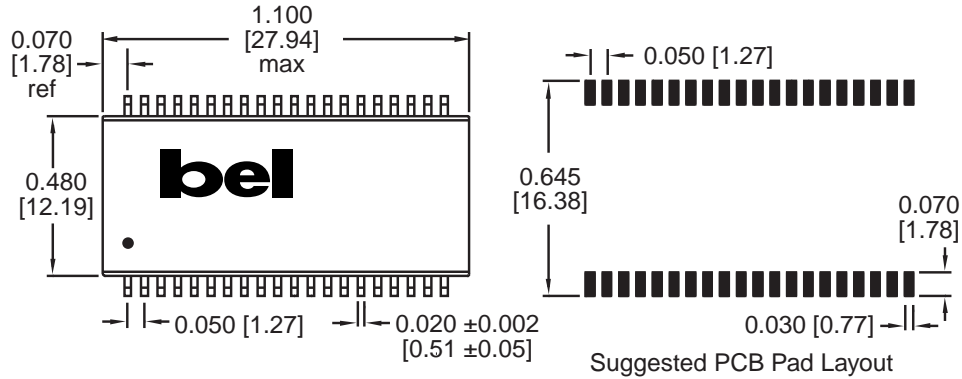


©2005 Bel Fuse Inc. Specifications subject to change without notice. 05.05

TM01109

### MECHANICAL

S553-6500-A7  
S553-6500-A8



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

#### S553-6500-A8 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

©2005 Bel Fuse Inc. Specifications subject to change without notice. 05.05

#### CORPORATE

**Bel Fuse Inc.**  
206 Van Vorst Street  
Jersey City, NJ 07302  
Tel 201-432-0463  
Fax 201-432-9542  
www.belfuse.com

#### FAR EAST

**Bel Fuse Ltd.**  
8F / 8 Luk Hop Street  
San Po Kong  
Kowloon, Hong Kong  
Tel 852-2328-5515  
Fax 852-2352-3706  
www.belfuse.com

#### EUROPE

**Bel Fuse Europe Ltd.**  
Preston Technology Management Centre  
Marsh Lane, Suite G7, Preston  
Lancashire, PR1 8UD, U.K.  
Tel 44-1772-556601  
Fax 44-1772-888366  
www.belfuse.com