

# HIGH FREQUENCY MAGNETICS

## T1/E1 Octal Transformer Modules

TM01122

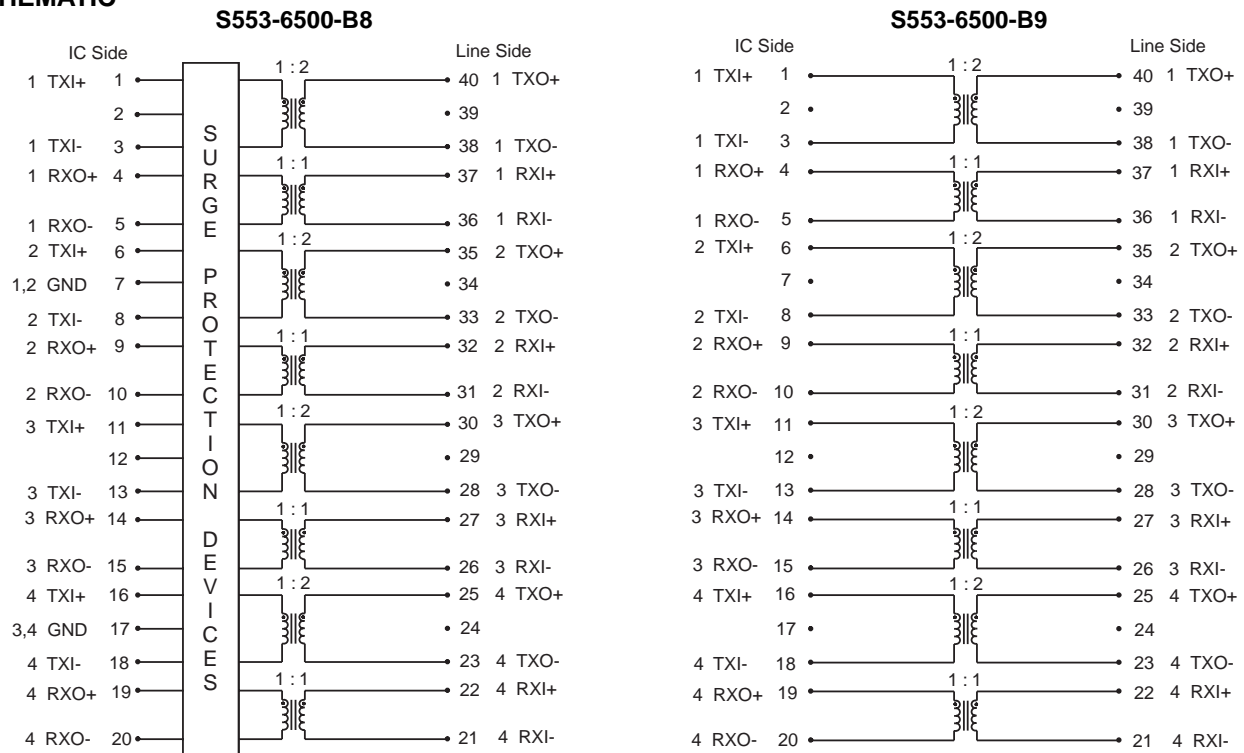
- Optimized for all Dallas 3.3V devices and Intel LXT380, LXT381 devices
- Eight transformers in one surface mount package
- Two modules:  
S553-6500-B8 with transformers and IC-side surge protection devices  
S553-6500-B9 with transformers only
- Meets ITU-T G.703 return loss from -40° to +85° C
- Operating 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: file number E150991

### ELECTRICAL SPECIFICATIONS at 25° C

Part Number	Turns Ratio ±2%		Primary Inductance at 10 kHz		Leakage Inductance at 1 MHz		DCR Ω max				Interwinding Capacitance pF max	Return Loss at 102 kHz 120Ω Application <sup>1</sup>			
			mH min		µH max							25° C dB typ		-40 to +85° C dB min	
	TXI : TXO	RXI : RXO	TXI	RXI	TXI	RXO	TXI	TXO	RXI	RXO		TX	RX	TX	RX
S553-6500-B8	1 : 2	1 : 1	1.5	1.8	0.3	0.5	0.6	1.2	0.6	0.6	35	19	30	18	19
S553-6500-B9	1 : 2	1 : 1	1.5	1.8	0.3	0.5	0.6	1.2	0.6	0.6	35	19	30	18	19

1. Terminated in 23.2 Ω for TX and 120 Ω for RX

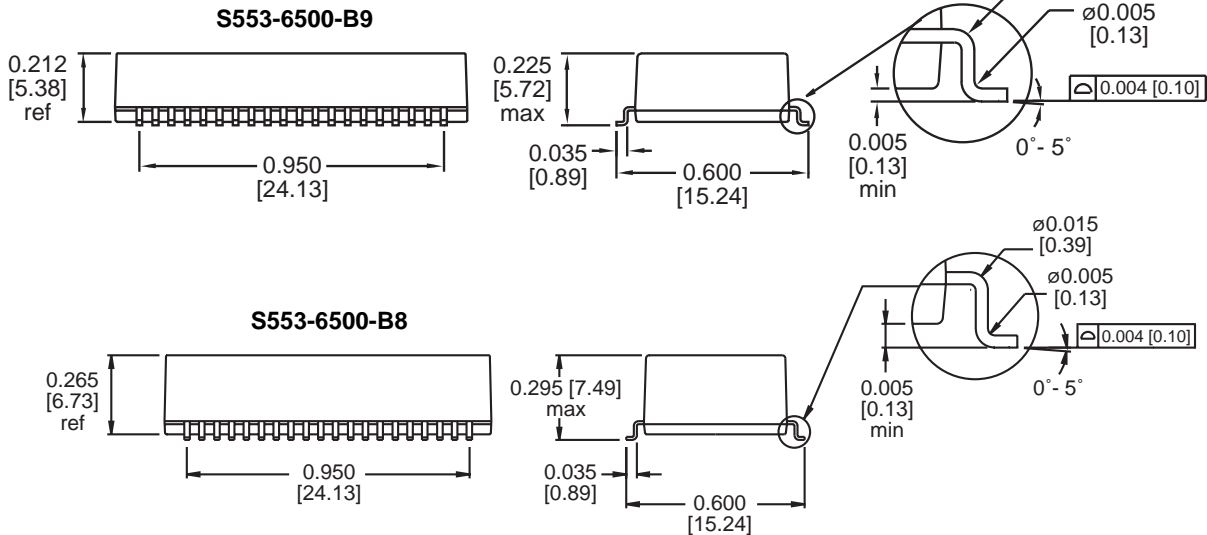
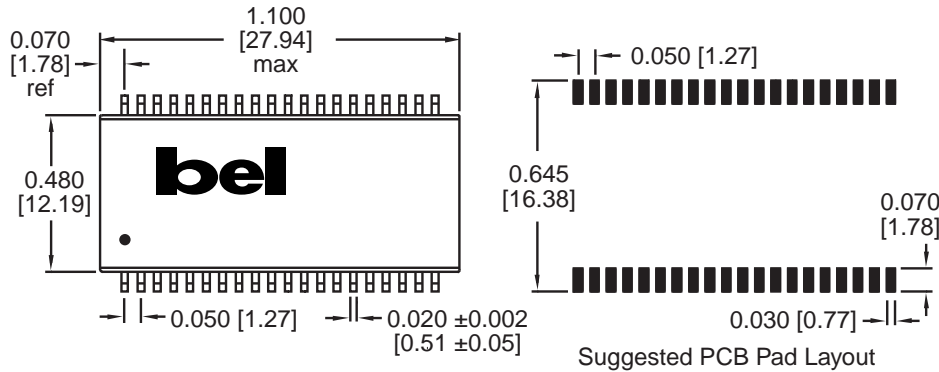
### SCHEMATIC



©2007 Bel Fuse Inc. Specifications subject to change without notice. 08.07

### MECHANICAL

#### S553-6500-B8 and S553-6500-B9



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

#### S553-6500-B8 Surge Protection Devices

TVS Diode Array: Protek PSRDA3.3-4  
Number of arrays: 4

**Note:** Surge protection provided by the Bel module is equivalent to that advertised in the Protek PRDA3.3-4 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

©2007 Bel Fuse Inc. Specifications subject to change without notice. 08.07

#### 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