



**THE DATASHEET OF**  
**S553-6500-89-F**



# HIGH FREQUENCY MAGNETICS

## T1/E1 Miniature Surface Mount Transformers

TM00144

- Meets pulse template and return loss requirements of T1/E1 Interface circuits
- Minimum interwinding breakdown voltage of 1500 Vrms
- Operating Temperature Range: -40° C 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

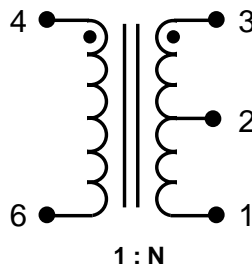
### ELECTRICAL SPECIFICATIONS at 25° C

Part Number	Turns Ratio	Inductance <sup>1</sup>	Leakage Inductance <sup>2</sup>	DCR		Interwinding Capacitance	Surge Voltage Capability <sup>3</sup>	
	(4 - 6) : (3 - 1)	(4 - 6)	(4 - 6)	(4 - 6)	(3 - 1)		Metallic	Longitudinal
	± 1%	mH min	μH max	Ω max	Ω max		V peak	V peak
S553-6500-89	1 : 1CT	1.6	1.2	1.7	1.8	45 max	3000	2500
S553-6500-90	1 : 1.14CT	1.6	0.8	2.1	2.5	35 typ	2500	2500
S553-6500-91	1 : 1.35CT	1.3	0.8	1.9	2.5	35 typ	2500	2500

1. measured at 10 kHz, 0.1 Vac
2. measured at 100 kHz, 0.1 Vac
3. See Supplementary Information

### SCHEMATIC

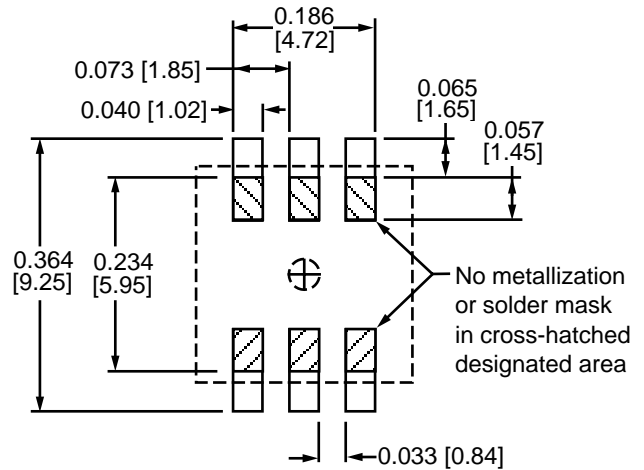
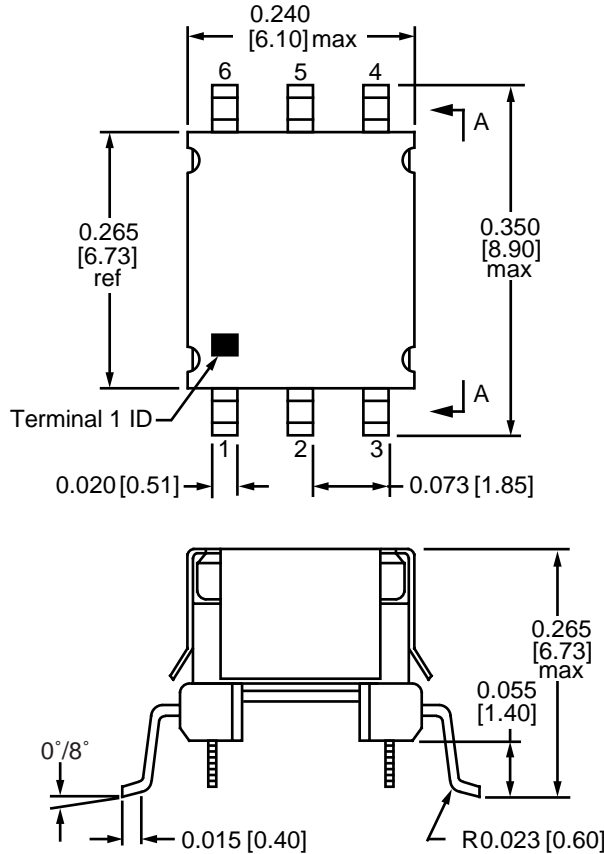
S553-6500-89  
S553-6500-90  
S553-6500-91



TM00144

#### MECHANICAL

S553-6500-89  
S553-6500-90  
S553-6500-91



#### Suggested PCB Pad Layout

Note: Unless otherwise specified, dimensions are nominal and in inches [millimeters].

#### Supplementary Information

Safety Agency Compatibility	Underwriters Laboratories, Inc. UL 1950
Surge Voltage Capability	10/700 $\mu$ s; 10 repetitions of alternating polarity, generator output: peak voltage, 25 $\Omega$ source
Flammability Compliance	IEC-695, 2-2 (needle flame test), materials are UL 94 VO approved
Simulation Model	SPICE computer simulation file available on request
Surface-Mount Packaging	Tape and Reel; 16 mm wide by 12 mm pitch; 13 inch OD; 4 inch ID 650 transformers per reel, maximum Meets ANSI/EIA 481-2 Carrier Tape Standards—JEDEC SO package
Terminal Lead Coplanarity	0.004 inch [0.10 mm]
PWB Process Capability	Machine placement (recommendation: locate by terminals, not body)

©2003 Bel Fuse Inc. Specifications subject to change without notice. 03.03

#### 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

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

 [View S553-6500-89-F on WIN SOURCE](#)

 [Bel Fuse Inc. Information](#)

## Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management