

HIGH FREQUENCY MAGNETICS

DS3/E3/STS-1 Dual-ratio Surface Mount Transformer

TM00149

- Miniature transformer supports E3, DS3, SONET STS-1 rates (34.368, 44.736, 51.84 Mb/s)
- Dual ratios for multiple applications:
Turns ratios: 1:1 and 1:2CT
Impedance ratios: 1:1 and 1:4
- Superior temperature linearity
- External shield for EMI suppression
- Can handle 15 mA DC Bias
- 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
- Precision machine winding: 1% tolerance
- Minimum interwinding breakdown voltage of 1500 Vrms

ELECTRICAL SPECIFICATIONS at 25° C

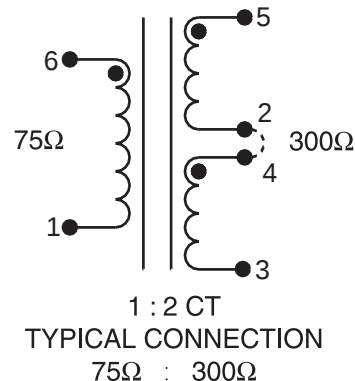
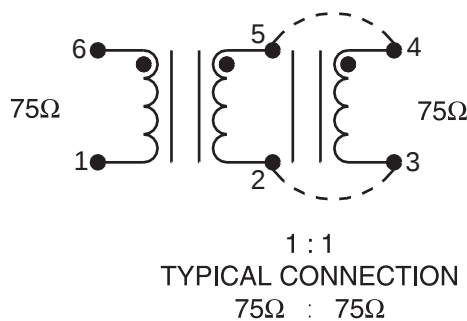
Part Number	Turns Ratio ± 1%		Inductance ³ μH min	Leakage Inductance ⁴	DCR			Interwinding Capacitance	Surge Voltage Capability ²	
					(1 - 6)	(2-5)	(3-4)		Metallic	Longitudinal
	(1-6) : (3-4) ¹	(1-6) : (3-5) ²	(1 - 6)	μH max	Ω max	Ω max	Ω max	pF typ	V peak	V peak
2795M	1 : 1	1 : 2 CT	42	0.1	0.2	0.2	0.2	10	4000	2500

1. with 2 & 3 connected and 4 & 5 connected
2. with 2 and 4 connected
3. measured at 10 kHz, 0.1 Vac
4. measured at 100 kHz, 0.1 Vac

Typical Frequency and Time Response		
Terminating Impedances	Bandwidth (3 dB)	Risetime
75Ω : 75Ω & 75Ω : 300Ω	150 kHz - 350 MHz	0.8 ns

SCHEMATICS

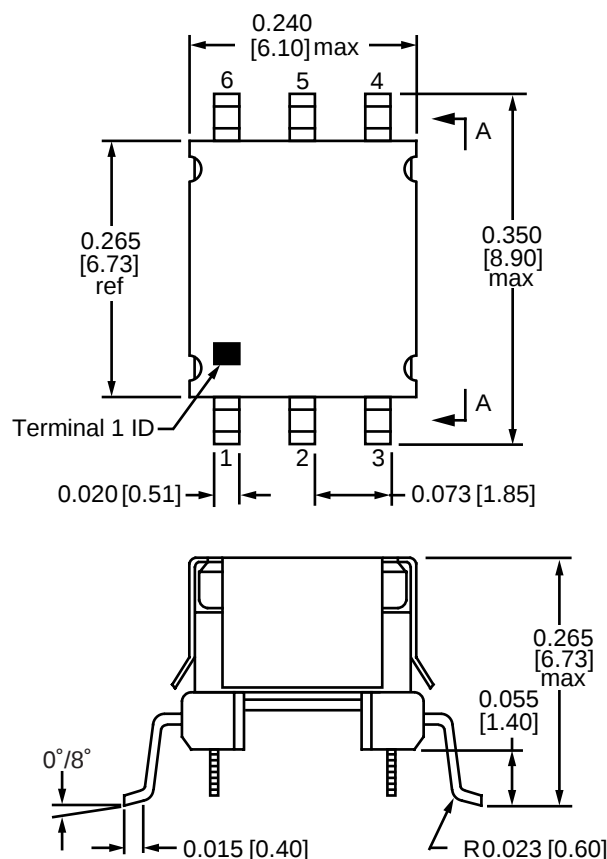
2795M



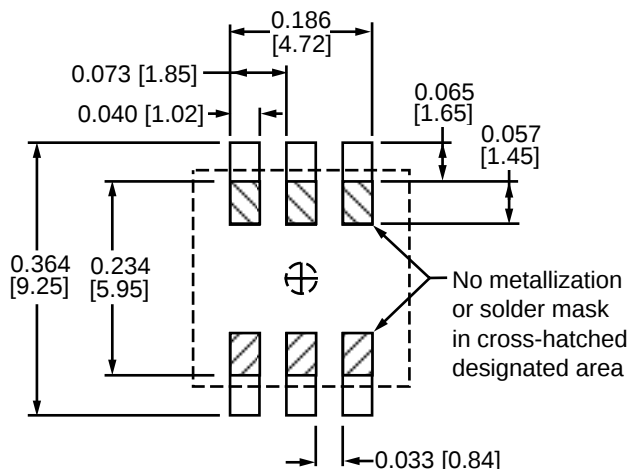
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2795M



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 μ s; 10 repetitions of alternating polarity, generator output: peak voltage, 25 Ω 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)

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CORPORATE

Bel Fuse Inc.
198 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