

HIGH FREQUENCY MAGNETICS

T1/E1 Miniature Surface Mount Transformers

TM00143

- Meet pulse template and return loss requirements of T1/E1 interface circuits
- Designed to meet stringent requirements of low-voltage applications
- Maximum inductance unbalance of center-tapped windings is 0.2%
- 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 ± 1%	Primary Inductance ¹ mH min	Leakage Inductance ² µH max	DCR Ω max		Interwinding Capacitance pF typ	Surge Voltage Capability ³	
							Metallic	Longitudinal
	Pri : Sec			(4 - 6)	(3 - 1)		V peak	V peak
2795K	1 : 1.93CT	0.810	0.4	1.2	2.3	35	3000	2500
2795H	1 : 2CT	1.3 ⁴	0.5	1.8	3.7	45	2500	2500
2795L	1 : 2.1CT	1.1	0.6	1.8	3.8	47	2500	2500
2795J	1 : 2.45CT	0.950	0.4	1.5	3.7	45	2500	2500

1. measured at 10 kHz, 0.5 Vac

2. measured at 100 kHz, 0.1 Vac

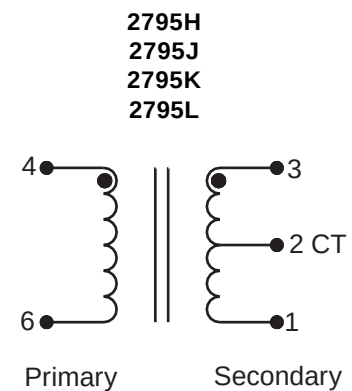
3. See Supplementary Information

4. measured at 10 kHz, 0.1 Vac

Minimum Return Loss for 2795J and 2795K used with Lucent 3.3 volt transceivers				
Interface	Frequency			
	51 kHz	102 kHz	2 MHz	3 MHz
Receive	14 dB	20 dB	20 dB	16 dB
Transmit ¹	9 dB	15 dB	15 dB	11 dB

1. For transmit, only, place external capacitor of 470 pF ± 10% across winding (4-6)

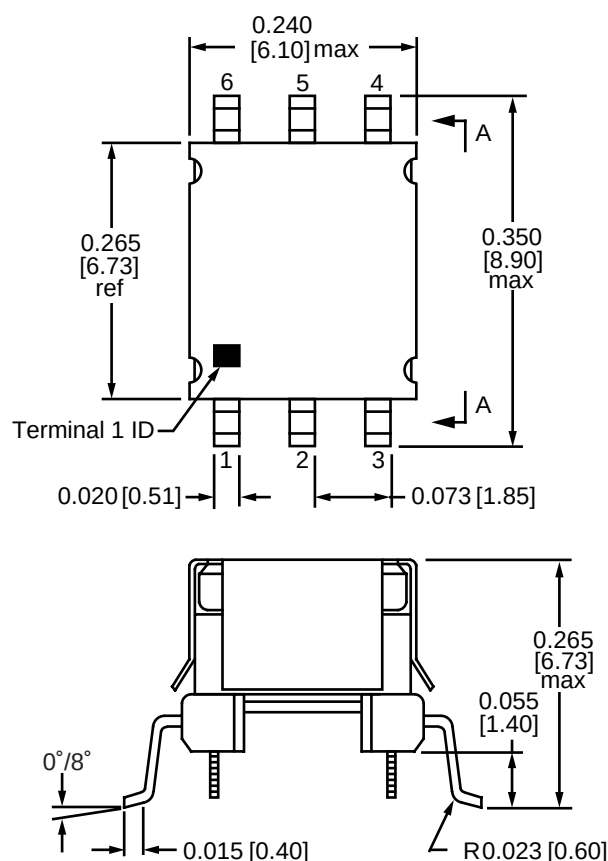
SCHEMATIC



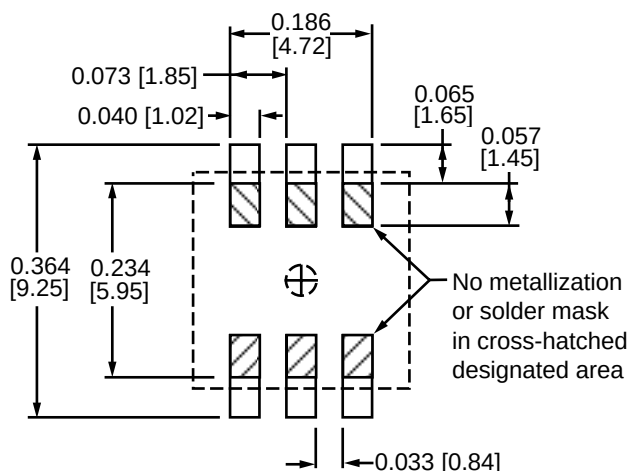
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MECHANICAL



2795H
2795J
2795K
2795L



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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