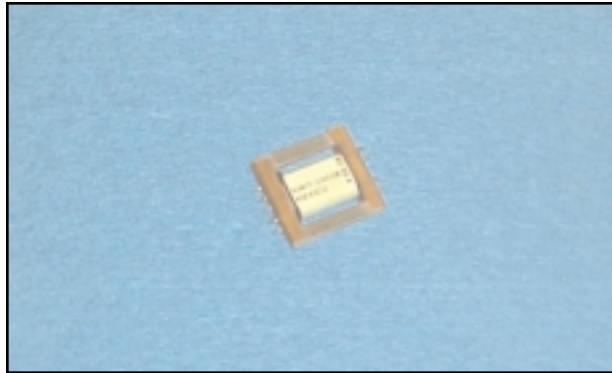


Analog Telephony / Modem Couplers



DESCRIPTION

The REMtech Magnetics SMIT-1393 is a "Dry" SMT Modem Isolation Transformer suitable for up to V.32bis (14.4 kbps) analog modem applications compliant with Worldwide safety norms.

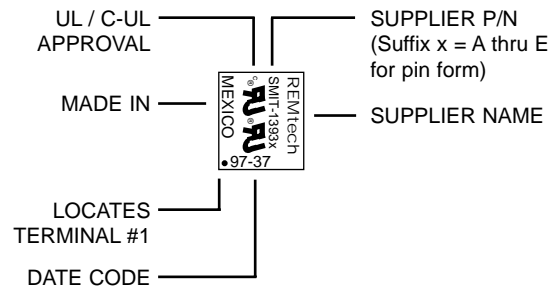
FEATURES

- Suitable for modem speeds up to V.32bis (14.4 kbps).
- Total Harmonic Distortion rated -79 dB typ. @ 600 Hz, -10 dBm.
- Insertion Loss rated 2.80 dB typ. @ 1000 Hz.
- Complies with IEC60950 Supplementary safety norms.
- Reflects 600 Ohms on Primary with 294 Ohms Secondary Load for 600-Ohm telephone lines.
- Uses minimal external components for impedance matching for pan-European CTR-21 telephone lines.
- Very small PCB footprint (19.8 mm x 16.3 mm).
- Thin (PCMCIA) Profile (4.32 mm).
- SMT Industry-standard pin configurations.

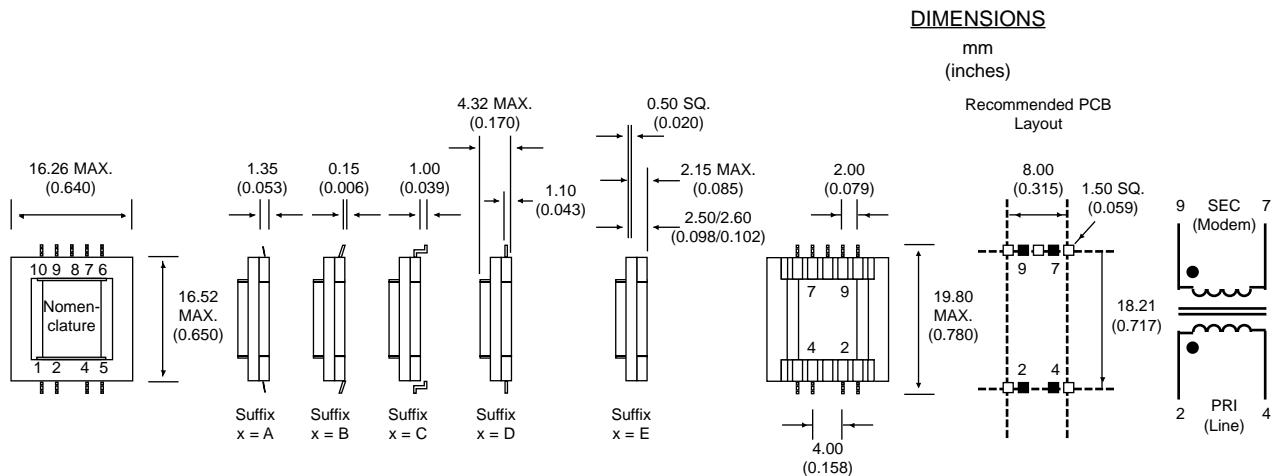
PRODUCT COMPLIANCE

- UL / C-UL recognized file number: E171120
- BSI certificate number(s): 8122
- BABT certificate of recognition: 1905

NOMENCLATURE (Fig. 1)



MECHANICAL DIMENSIONS (Fig. 2)



Note: Routing conductive traces under the transformer is not recommended.

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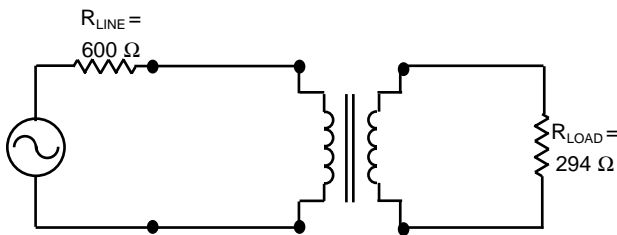
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ELECTRICAL PERFORMANCE SPECIFICATIONS

Electrical Performance Specifications ( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise specified)

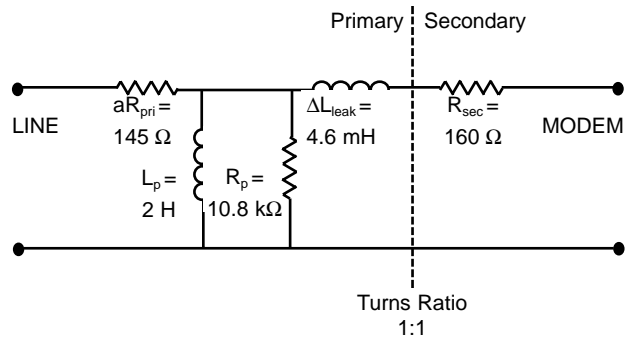
PARAMETERS	CONDITIONS	MIN	TYP	MAX	UNITS
Impedance	Reflected on Primary With Load on Secondary	-	600	-	Ohms
		-	294	-	Ohms
Total Harmonic Distortion	@ 600 Hz, -10 dBm	-	-79	-76	dB
Insertion Loss	Per IEEE method; @ 1000 Hz	-	2.80	3.45	dB
Return Loss	300 Hz - 3500 Hz Per 600 Ohm Match (Fig. 3) Per CTR21 Pan-Euro Match (Fig. 10)	20	-	-	dB
		25	-	-	dB
Dielectric Breakdown Isolation Production methods applied:	Safety Standard tested 1 Min.	1500	-	-	Vrms
	HiPot Voltage	1875	-	-	Vrms
	Duration	2	-	-	Sec
	Trip Leakage Current	-	-	200	$\mu\text{A}$
Frequency Response	200 Hz - 4000 Hz	-	$\pm 0.25$	-	dB
Longitudinal Balance	Per FCC part 68.310 60 Hz - 1000 Hz 1000 Hz - 4000 Hz	60	-	-	dB
		40	-	-	dB
DC Resistance @ $20^\circ\text{C}$ , $\pm 10\%$	Primary Winding	-	145	-	Ohms
	Secondary Winding	-	160	-	Ohms
DC Current in Primary	-	-	0	-	mADC
Turns Ratio	Primary to Secondary; $\pm 2\%$	-	1:1	-	Turns
Operating Temperature	-	-40	-	105	$^\circ\text{C}$
Storage Temperature	-	-40	-	125	$^\circ\text{C}$
Soldering Temperature	10 Sec. Max.	-	-	260	$^\circ\text{C}$

600 OHM MATCH (Fig. 3)



SCHEMATIC EQUIVALENT (Fig. 4)

(Typical Transformer Model @ 1 V, 1 kHz)

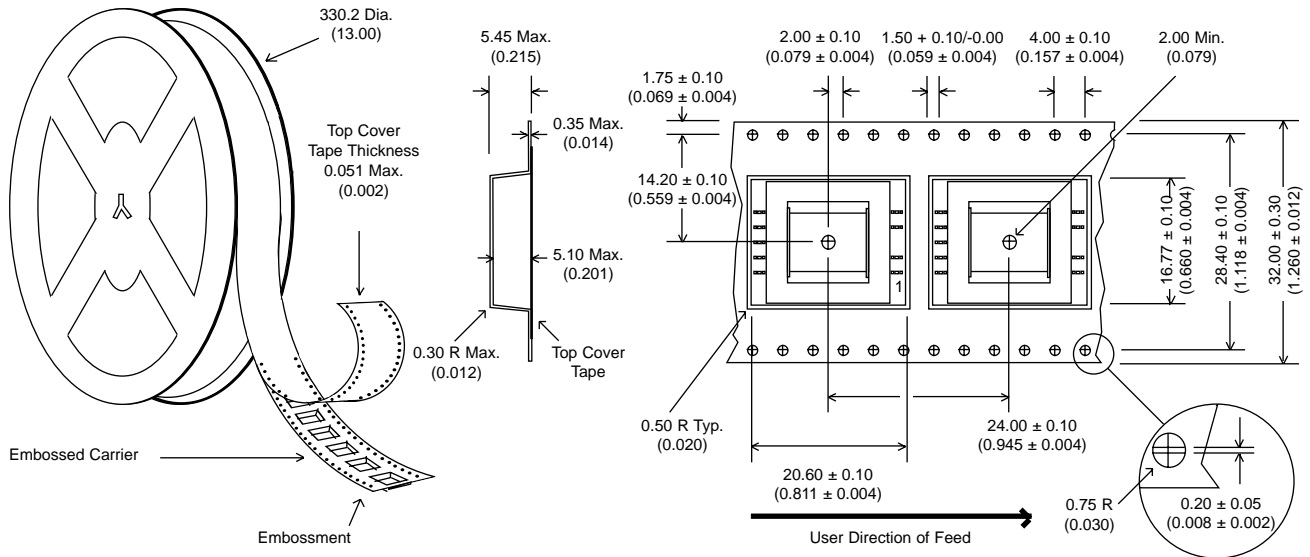


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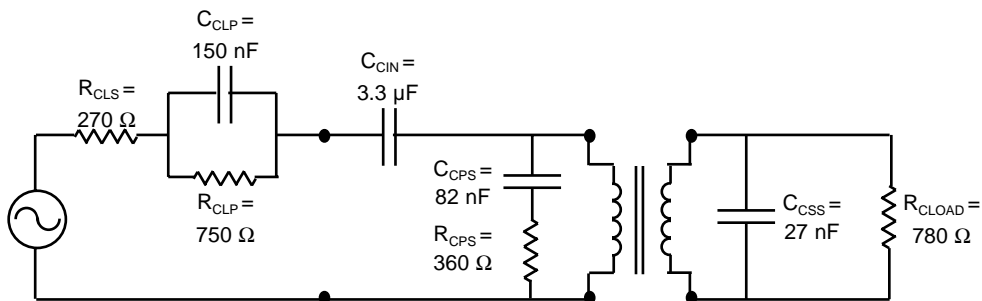
STANDARD PACKAGING (Fig. 9)

Tape and Reel Packaging for SMIT-1393



PAN-EUROPEAN CTR21 MATCH (Fig. 10)

(Application circuits available on request for specific national match requirements.)

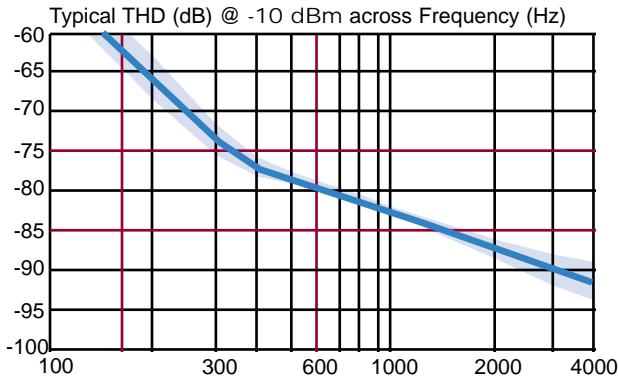


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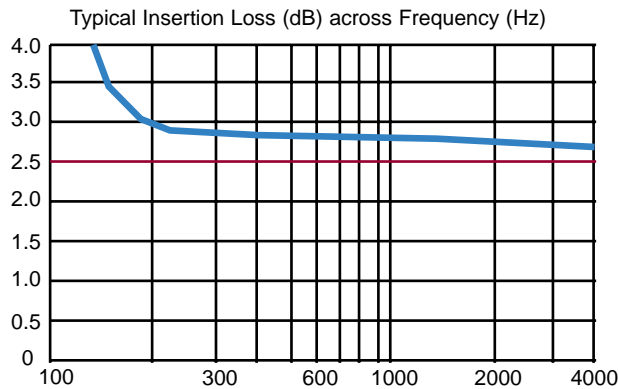
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PERFORMANCE DATA

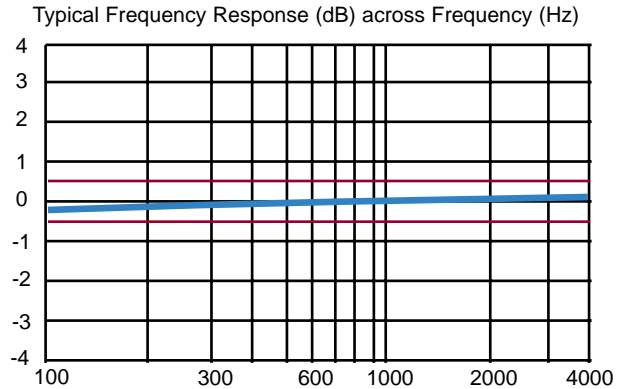
TOTAL HARMONIC DISTORTION (Fig. 5)



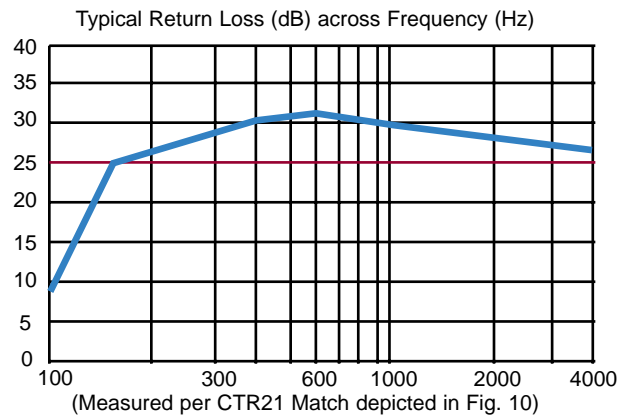
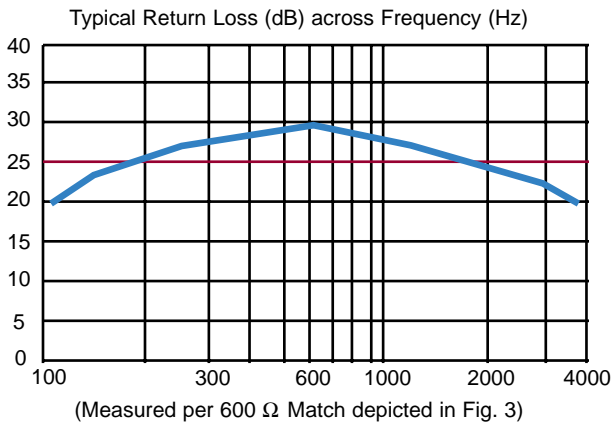
INSERTION LOSS (Fig. 6)



FREQUENCY RESPONSE (Fig. 7)



RETURN LOSS (Fig. 8)



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