

DESCRIPTION

The REMtech Magnetics EMIT-4031L is a “Dry” Encapsulated Modem Isolation Transformer suitable for analog voice and V.32 (9.6 kbps) modem applications compliant with International safety norms. EMIT-4031L may be adapted to analog modems with data rates up to V.32bis (14.4 kbps).

Unlike transformers only slightly smaller (14 mm sq), the EMIT-4031L family opens an economical roadmap to full V.90 (56 kbps) speed upgrades. Example: EMIT-4035L.

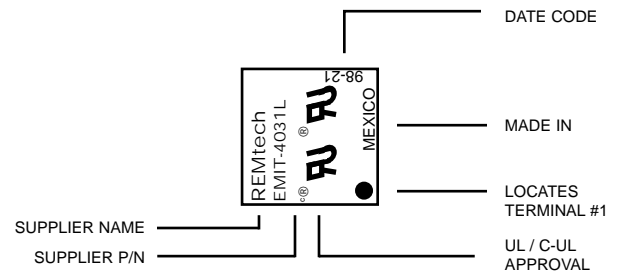
FEATURES

- Suitable for modem speeds up to V.32 (9.6 kbps) and adaptable to modem speeds up to V.32bis (14.4 kbps).
- Total Harmonic Distortion rated -73 dB typ. @ 600 Hz, -10 dBm.
- Insertion Loss rated 1.10 dB typ. @ 1000 Hz.
- Complies with IEC60950 Reinforced safety norms.
- Reflects 600 Ohms on Primary with 600 Ohms Secondary Load.
- Uses minimal external components for complex impedance matching to pan-European CTR21 line standards.
- Very small PCB footprint (18.3 mm x 18.3 mm).
- Low-Profile (12.6 mm).
- Industry-standard pin configuration.

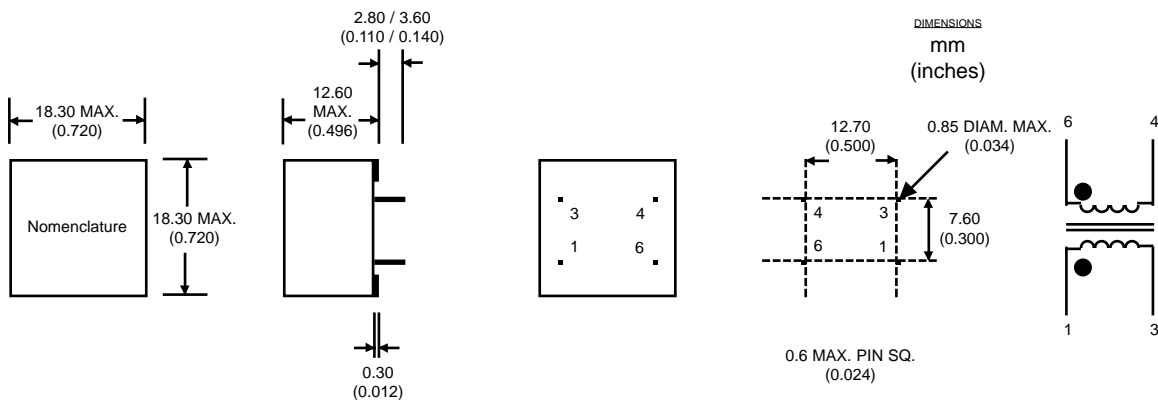
PRODUCT COMPLIANCE

- UL / C-UL recognized file number: Pending
- BSI certificate number(s): Pending
- BAPT certificate of recognition: Pending

NOMENCLATURE (Fig. 1)



MECHANICAL DIMENSIONS (Fig. 2)



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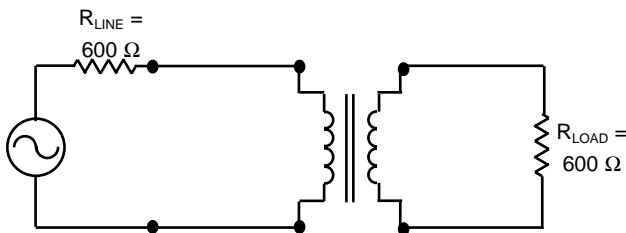
Analog Telephony / Modem Couplers

ELECTRICAL PERFORMANCE SPECIFICATIONS

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

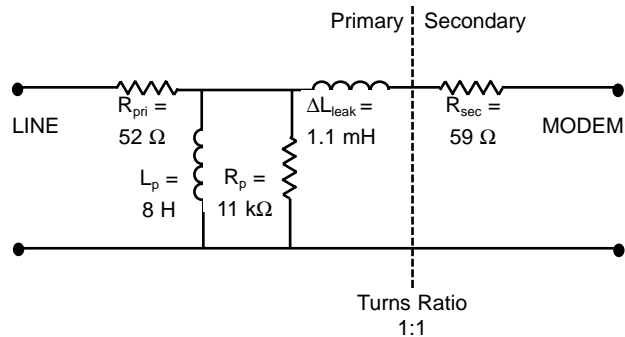
PARAMETERS	CONDITIONS	MIN	TYP	MAX	UNITS
Impedance	Reflected on Primary With Load on Secondary	-	600	-	Ohms
		-	600	-	Ohms
Total Harmonic Distortion	@ 600 Hz, -10 dBm	-	-73	-65	dB
Insertion Loss	Per IEEE method; @ 1000 Hz	-	1.10	1.50	dB
Return Loss	200 Hz - 4000 Hz Per 600 Ohm Match (Fig. 3) Per CTR21 Pan-Euro Match (Fig. 10)	18	-	-	dB
		20	-	-	dB
Dielectric Breakdown Isolation Production methods applied:	Safety Standard tested 1 Min.	3000	-	-	Vrms
	HiPot Voltage	3750	-	-	Vrms
	Duration	2	-	-	Sec
	Trip Leakage Current	-	-	200	μA
Frequency Response	200 Hz - 4000 Hz	-	± 0.50	-	dB
Longitudinal Balance	Per FCC part 68.310 60 Hz - 1000 Hz 1000 Hz - 4000 Hz	60	-	-	dB
		40	-	-	dB
DC Resistance @ 20°C , $\pm 10\%$	Primary Winding Secondary Winding	-	52	-	Ohms
		-	59	-	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)

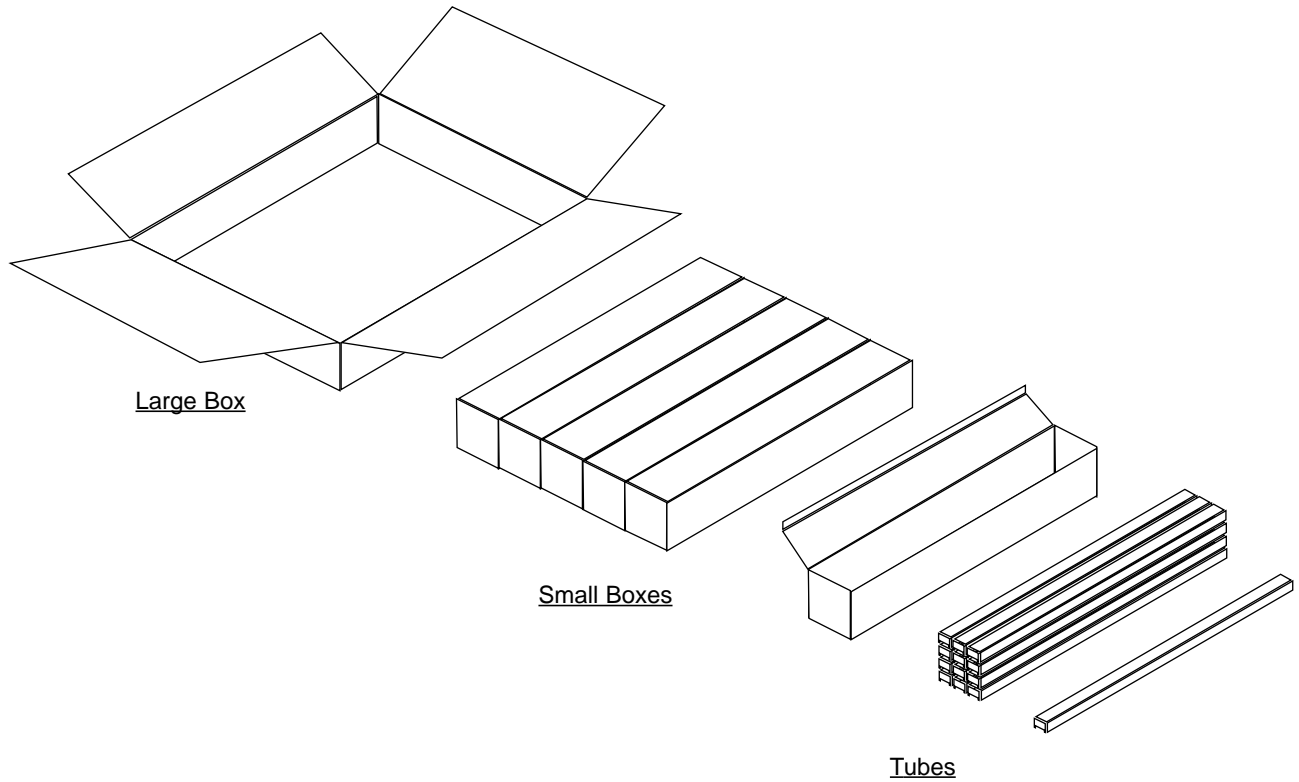
(Typical Transformer Model @ 1 V, 1 kHz)



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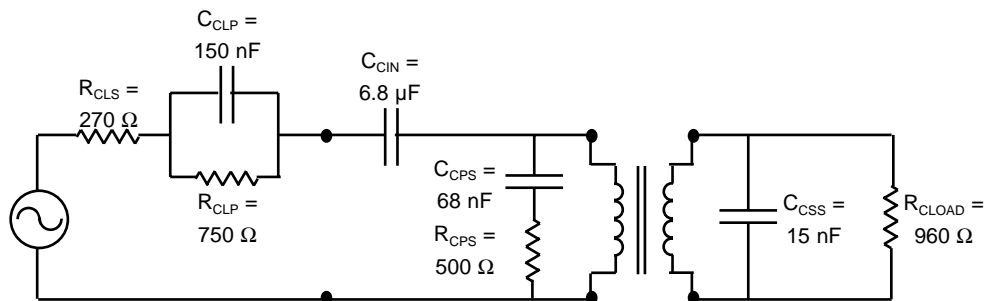
STANDARD PACKAGING (Fig. 9)



Packaging Material	Contents	#Transformers
Large Box	5 Small Boxes	1500
Small Box	12 Tubes	300
Tube	Transformers	25

PAN-EUROPEAN CTR21 MATCH (Fig. 10)

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

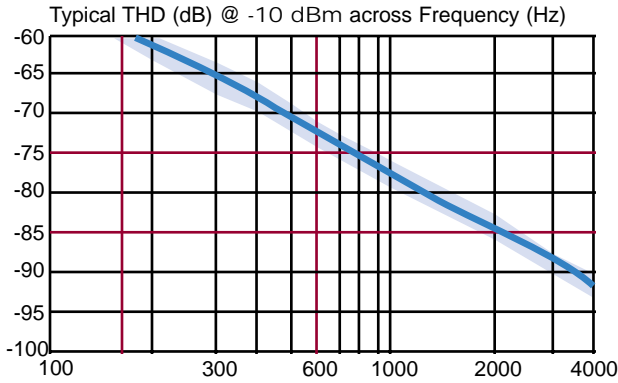


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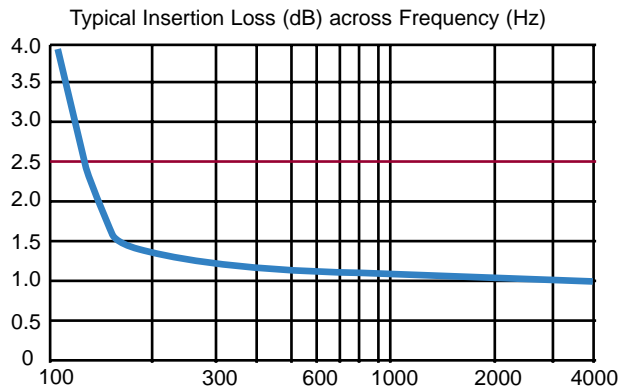
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PERFORMANCE DATA

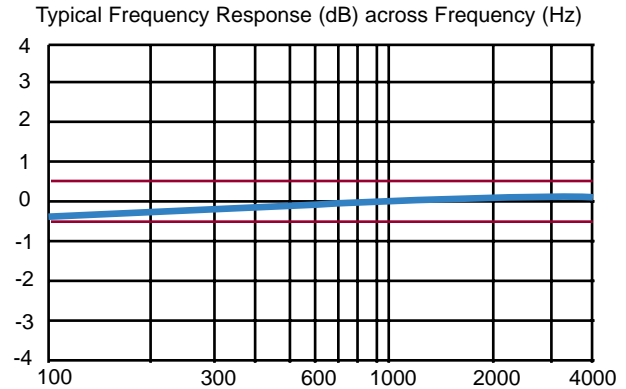
TOTAL HARMONIC DISTORTION (Fig. 5)



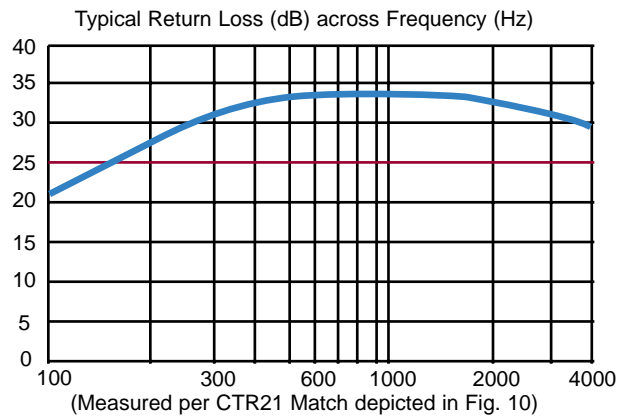
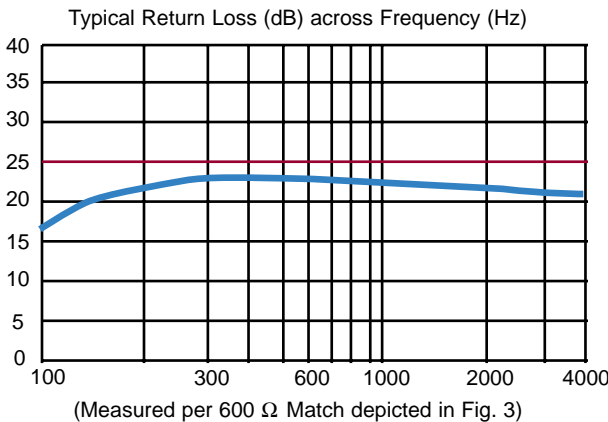
INSERTION LOSS (Fig. 6)



FREQUENCY RESPONSE (Fig. 7)



RETURN LOSS (Fig. 8)



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