

DESCRIPTION

The REMtech Magnetics EMIT-101 is a low-cost “Wet” Modem Isolation Transformer suitable for up to V.32 (9.6 kbps) analog modem applications compliant with Domestic safety norms.

EMIT-101 applications include fax machines, DBS / Set-top boxes, security, and electric metering.

EMIT-101 offers higher dielectric breakdown isolation (hipot) compared to MIT-101. Our “Wet” transformers with the same MIT-101 platform can be encapsulated similarly.

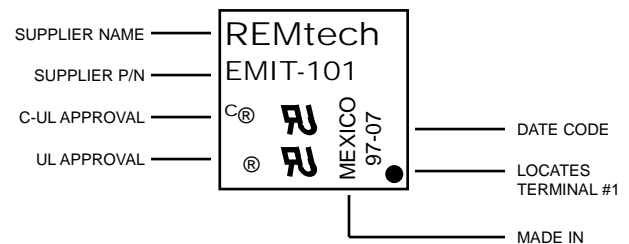
FEATURES

- Suitable for modem speeds up to V.32 (9.6 kbps).
- Cost-effective “Wet” coupler construction reduces DAA components.
- Total Harmonic Distortion rated -55 dB typ. @ 600 Hz, -10 dBm.
- Insertion Loss rated 2.50 dB max. @ 1000 Hz.
- Complies with UL1459 safety norms, but tested to higher 4 kVrms dielectric breakdown isolation.
- Reflects 600 Ohms on Primary with 470 Ohms Secondary Load.
- Small PCB footprint (25.2 mm x 24.0 mm).
- Industry-standard pin configuration.

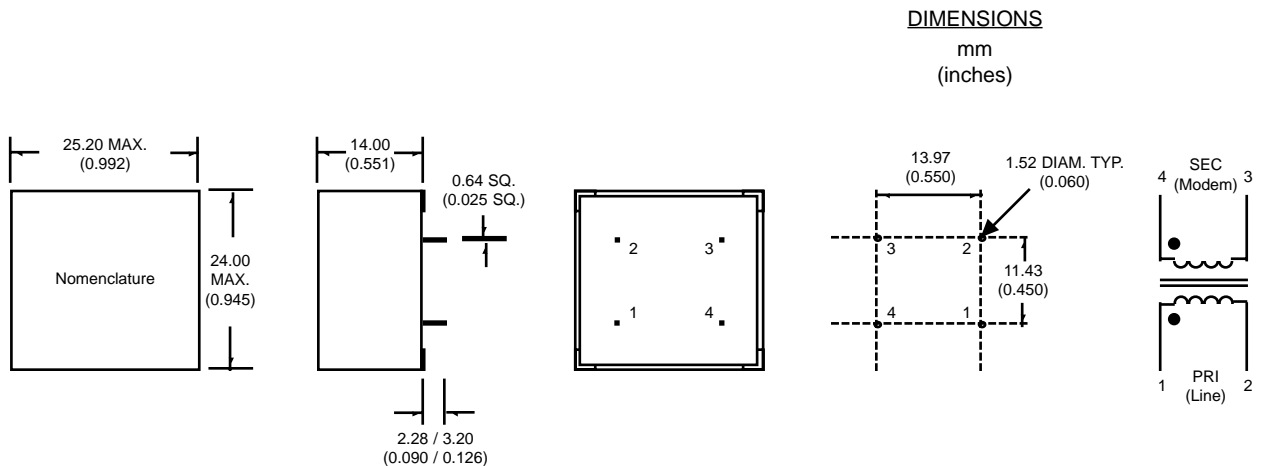
PRODUCT COMPLIANCE

- UL / C-UL recognized file number: E171120

NOMENCLATURE (Fig. 1)



MECHANICAL DIMENSIONS (Fig. 2)



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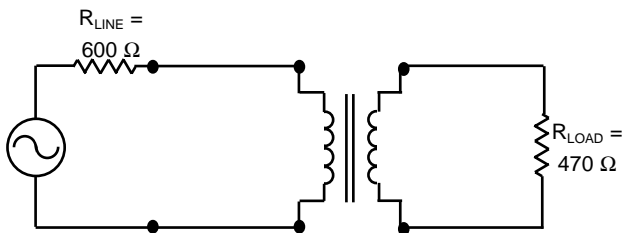
Analog Telephony / Modem Couplers

ELECTRICAL PERFORMANCE SPECIFICATIONS

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

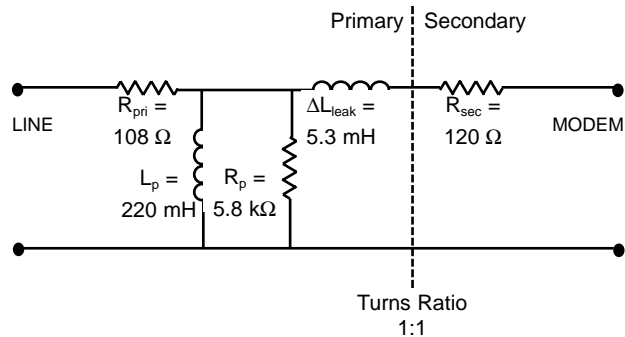
PARAMETERS	CONDITIONS	MIN	TYP	MAX	UNITS
Impedance	Reflected on Primary With Load on Secondary	-	600	-	Ohms
		-	470	-	Ohms
Total Harmonic Distortion	@ 600 Hz, -10 dBm	-	-55	-	dB
Insertion Loss	Per IEEE method; @ 1000Hz, 30mADC	-	-	2.50	dB
Return Loss	200 Hz - 500 Hz 500 Hz - 4000 Hz Per 600 Ohm Match (Fig. 3)	5	-	-	dB
		8	-	-	dB
		-	-	200	μA
Dielectric Breakdown Isolation Production methods applied:	Safety Standard tested 1 Min. HiPot Voltage Duration Trip Leakage Current	1000	-	-	Vrms
		4000	-	-	Vrms
		2	-	-	Sec
		-	-	200	μA
Frequency Response	300 Hz - 600 Hz 600 Hz - 3500 Hz	-	± 4.00	-	dB
		-	± 1.00	-	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	-	108	-	Ohms
		-	120	-	Ohms
DC Current in Primary	-	-	30	100	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)

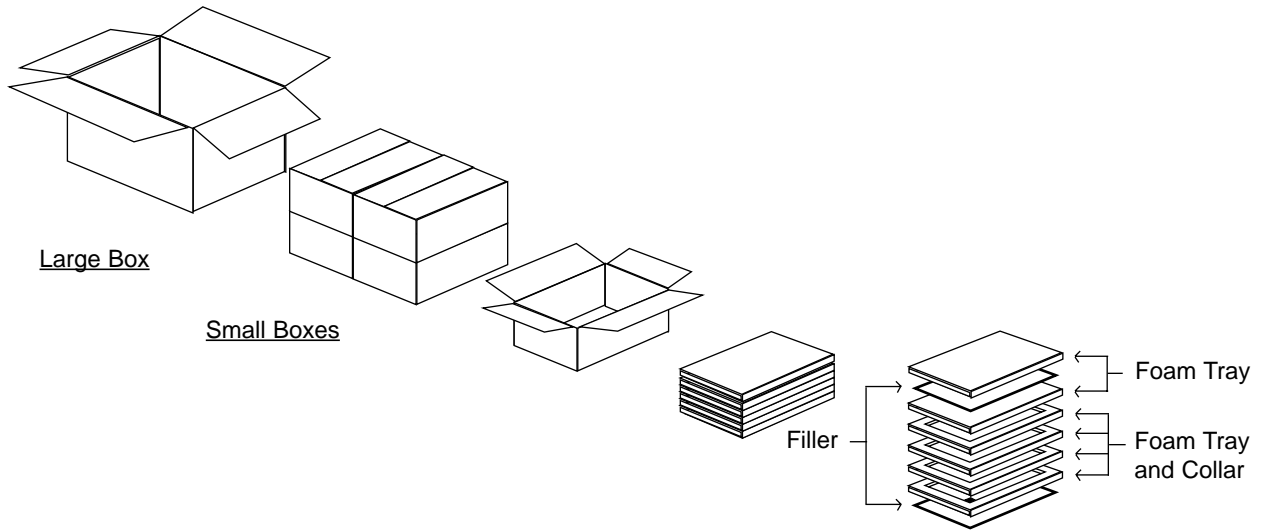
(Typical Transformer Model @ 1 V, 1 kHz)



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STANDARD PACKAGING (Fig. 9)



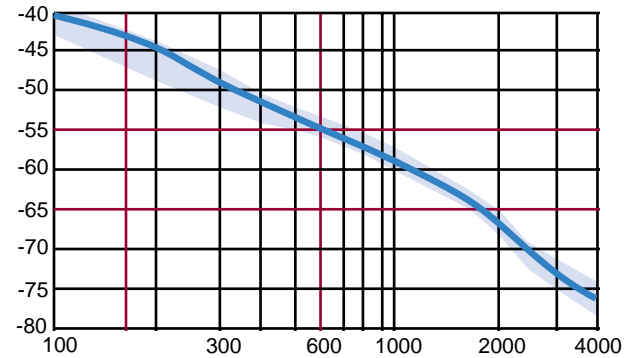
Packaging

Material	Contents	#Transformers
Large Box	4 Small Boxes	1408
Small Box	4 Trays	352
Tray	88 Transformers	88
---	Transformer	1

Analog Telephony / Modem Couplers

PERFORMANCE DATA

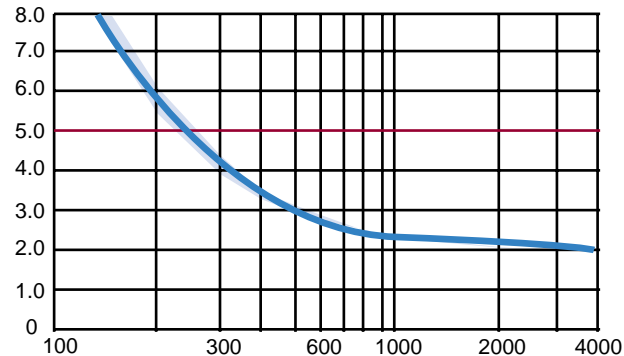
TOTAL HARMONIC DISTORTION (Fig. 5)



Note y-axis.

INSERTION LOSS (Fig. 6)

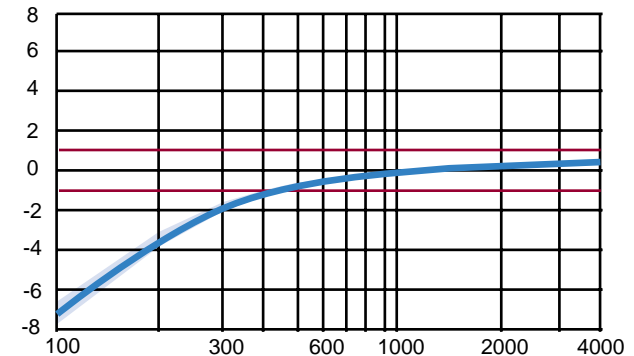
Typical Insertion Loss (dB) across Frequency (Hz)



Note y-axis.

FREQUENCY RESPONSE (Fig. 7)

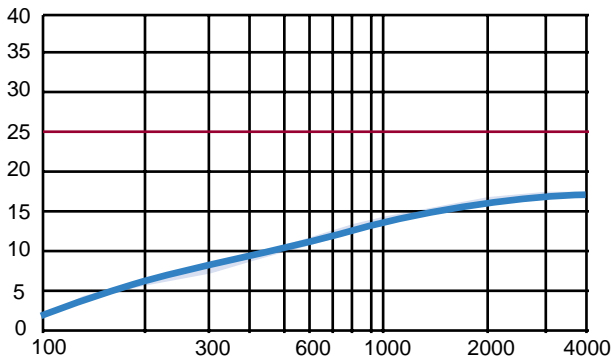
Typical Frequency Response (dB) across Frequency (Hz)



Note y-axis.

RETURN LOSS (Fig. 8)

Typical Return Loss (dB) across Frequency (Hz)



(Measured per 600 Ω Match depicted in Fig. 3)

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