

### 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.
- Complies with Bellcore second-level lightning surge specification GR-1089-CORE at 5kV<sub>peak</sub>, 2 μSec.
- Reflects 600 Ohms on Primary with 470 Ohms Secondary Load.
- Small PCB footprint (24.0 mm x 23.0 mm).
- Low-Profile (12.0 mm).
- Industry-standard pin configuration.

### DESCRIPTION

The REMtech Magnetics MIT-101V 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.

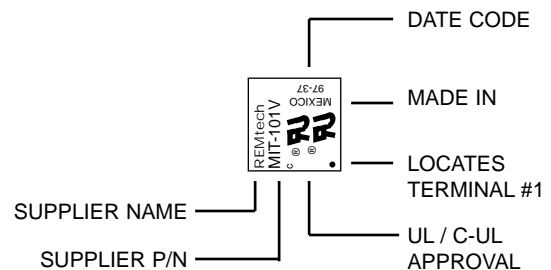
MIT-101V applications include fax machines, DBS / Set-top boxes, computer telephony, POS, security, and electric metering.

MIT-101V enhances MIT-101 to survive 5kV lightning transients.

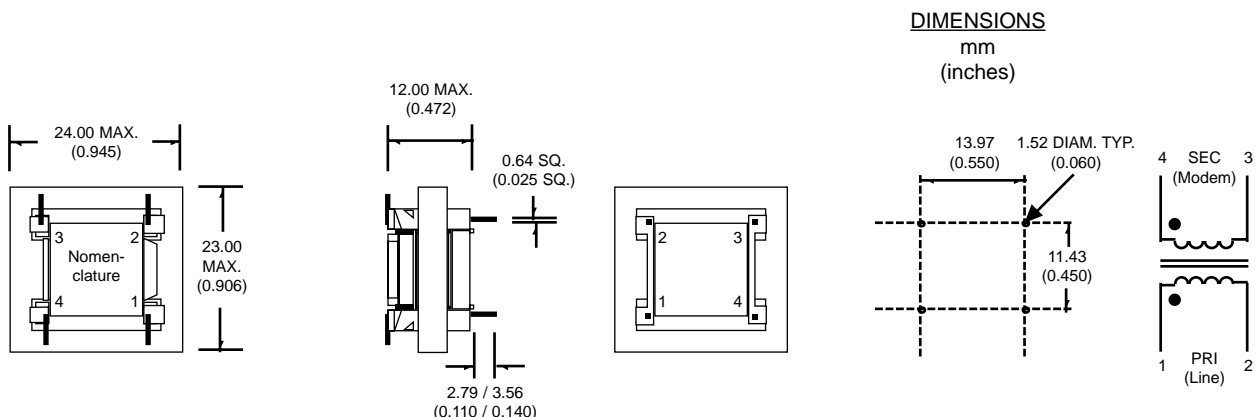
### PRODUCT COMPLIANCE

- UL / C-UL recognized file number: E171120

### NOMENCLATURE (Fig. 1)



### MECHANICAL DIMENSIONS (Fig. 2)



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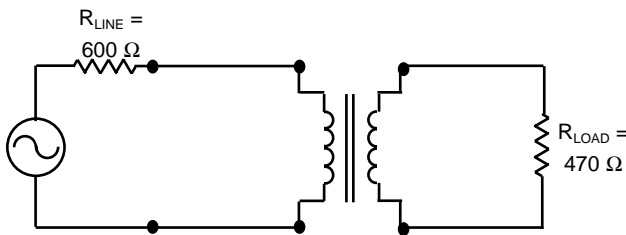
Analog Telephony / Modem Couplers

ELECTRICAL PERFORMANCE SPECIFICATIONS

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

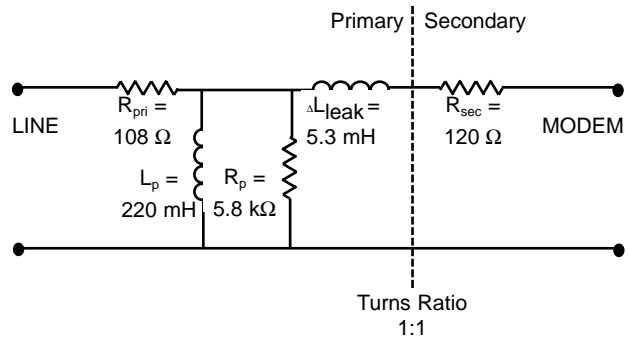
PARAMETERS	CONDITIONS	MIN	TYP	MAX	UNITS
Impedance	Reflected on Primary With Load on Secondary	-	600	-	Ohms
		-	470	-	Ohms
Total Harmonic Distortion	@ 600 Hz, -10 dBm	-	-55	-	dB
Insertion Loss	Per IEEE method; @ 1000Hz, 30mADC	-	-	2.50	dB
Return Loss	200 Hz - 500 Hz 500 Hz - 4000 Hz Per 600 Ohm Match (Fig. 3)	5	-	-	dB
		8	-	-	dB
		-	-	-	-
Dielectric Breakdown Isolation Production methods applied:	Safety Standard tested 1 Min. HiPot Voltage Duration Trip Leakage Current	1000	-	-	Vrms
		1250	-	-	Vrms
		2	-	-	Sec
		-	-	200	$\mu\text{A}$
Frequency Response	300 Hz - 600 Hz 600 Hz - 3500 Hz	-	$\pm 4.00$	-	dB
		-	$\pm 1.00$	-	dB
Longitudinal Balance	Per FCC part 68.310 60 Hz - 1000 Hz 1000 Hz - 4000 Hz	60	-	-	dB
		40	-	-	dB
		-	-	-	-
DC Resistance @ $20^\circ\text{C}$ , $\pm 10\%$	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)

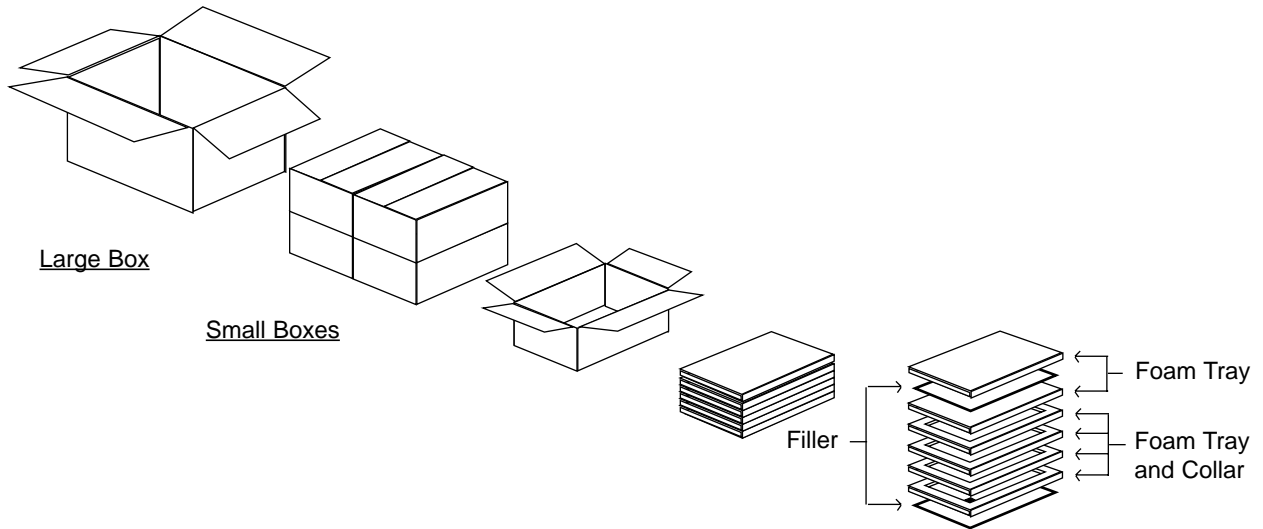
(Typical Transformer Model @ 1 V, 1 kHz)



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STANDARD PACKAGING (Fig. 9)



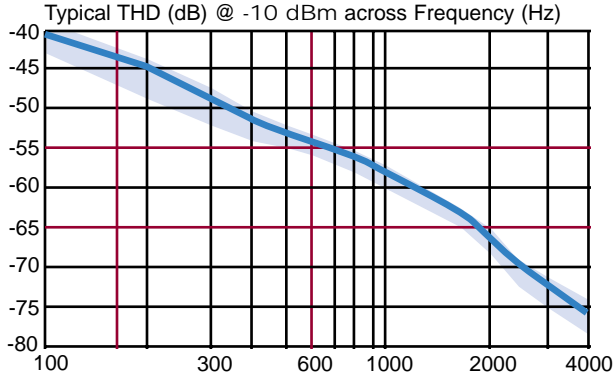
Packaging

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

Analog Telephony / Modem Couplers

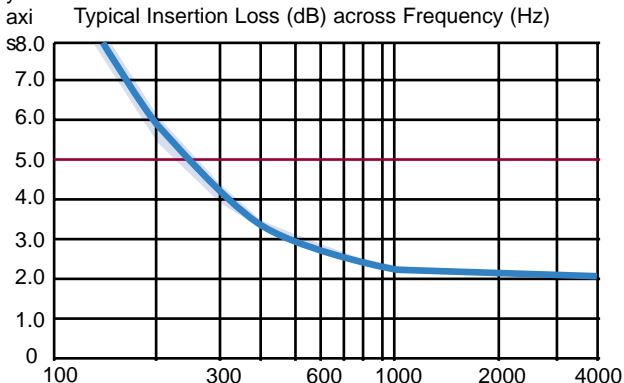
PERFORMANCE DATA

TOTAL HARMONIC DISTORTION (Fig. 5)



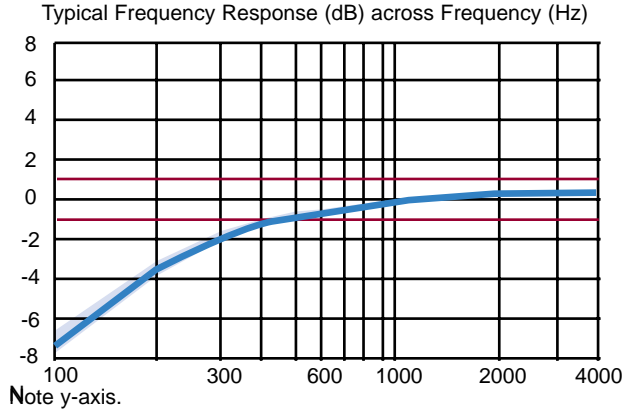
Note y-axis.

INSERTION LOSS (Fig. 6)



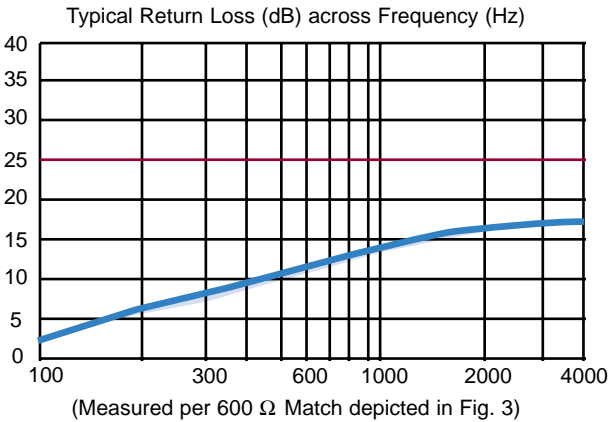
Note y-axis.

FREQUENCY RESPONSE (Fig. 7)



Note y-axis.

RETURN LOSS (Fig. 8)



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