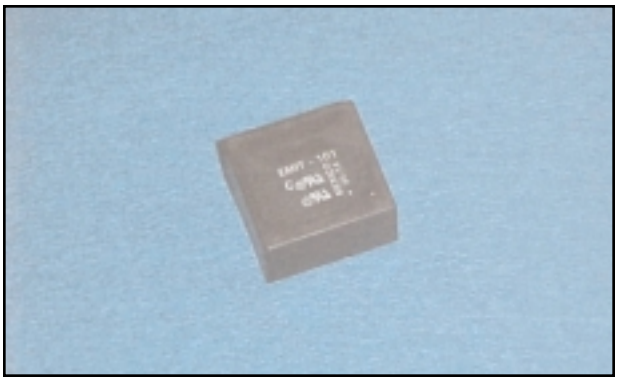
Analog Telephony / Modem Couplers



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.

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.

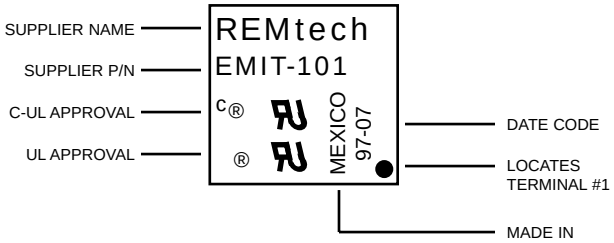
EMIT-101 applications include fax machines, DBS / Set-top boxes, security, and electric metering.

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.

PRODUCT COMPLIANCE

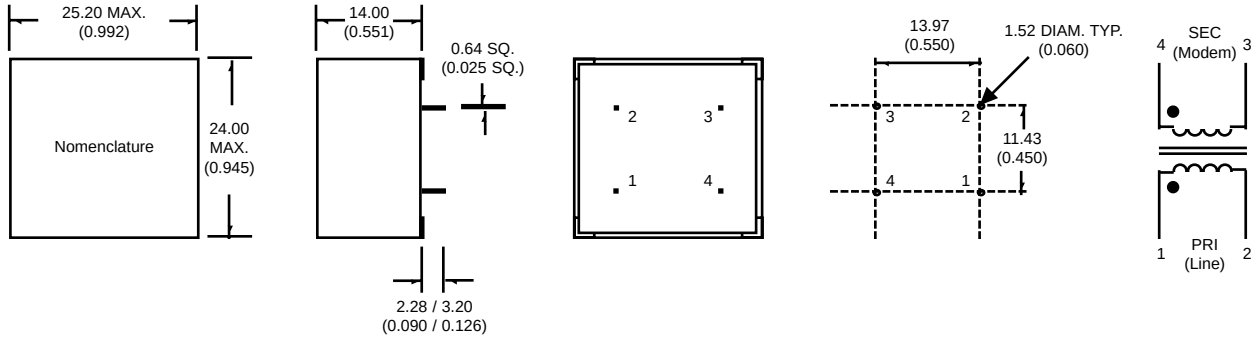
- UL / C-UL recognized file number: E171120

NOMENCLATURE (Fig. 1)



MECHANICAL DIMENSIONS (Fig. 2)

DIMENSIONS
mm
(inches)



Literature Number: DSA.EMIT-101

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North America
Tel: 1-847-545-6700
Fax: 1-847-545-6720

Europe
Tel: 32-11-300868
Fax: 32-11-300890

Asia
Tel: 886-2-2523-6368
Fax: 886-2-2523-6369

Japan
Tel: 03-3980-2212
Fax: 03-3980-2213

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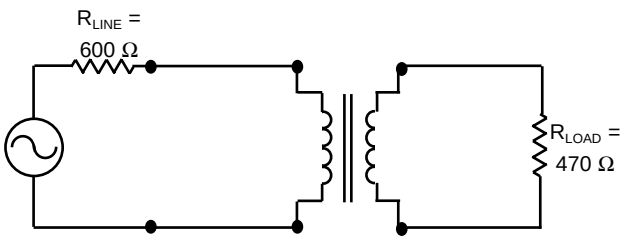
ELECTRICAL PERFORMANCE SPECIFICATIONS

Electrical Performance Specifications (T_A = 25 °C unless otherwise specified)

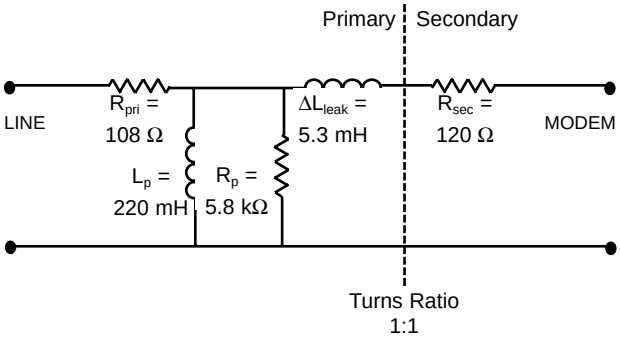
PARAMETERS	CONDITIONS	MIN	TYP	MAX	UNITS
Impedance	Reflected on Primary With Load on Secondary	- -	600 470	- -	Ohms Ohms
Total Harmonic Distortion	@ 600 Hz, -10 dBm	-	-55	-	dB
Insertion Loss	Per IEEE method; @ 1000Hz, 30mADC	-	-	2.50	dB
Return Loss	200 Hz - 500 Hz 500 Hz - 4000 Hz Per 600 Ohm Match (Fig. 3)	5 8	- -	- -	dB dB
Dielectric Breakdown Isolation Production methods applied:	Safety Standard tested 1 Min. HiPot Voltage Duration Trip Leakage Current	1000 4000 2 -	- - - -	- - - 200	Vrms Vrms Sec µA
Frequency Response	300 Hz - 600 Hz 600 Hz - 3500 Hz	- -	±4.00 ±1.00	- -	dB dB
Longitudinal Balance	Per FCC part 68.310 60 Hz - 1000 Hz 1000 Hz - 4000 Hz	 60 40	 - -	 - -	 dB dB
DC Resistance @ 20°C, ±10%	Primary Winding Secondary Winding	- -	108 120	- -	Ohms Ohms
DC Current in Primary	-	-	30	100	mADC
Turns Ratio	Primary to Secondary; ±2%	-	1:1	-	Turns
Operating Temperature	-	-40	-	105	°C
Storage Temperature	-	-40	-	125	°C
Soldering Temperature	10 Sec. Max.	-	-	260	°C

600 OHM MATCH (Fig. 3)



SCHEMATIC EQUIVALENT (Fig. 4)

(Typical Transformer Model @ 1 V, 1 kHz)



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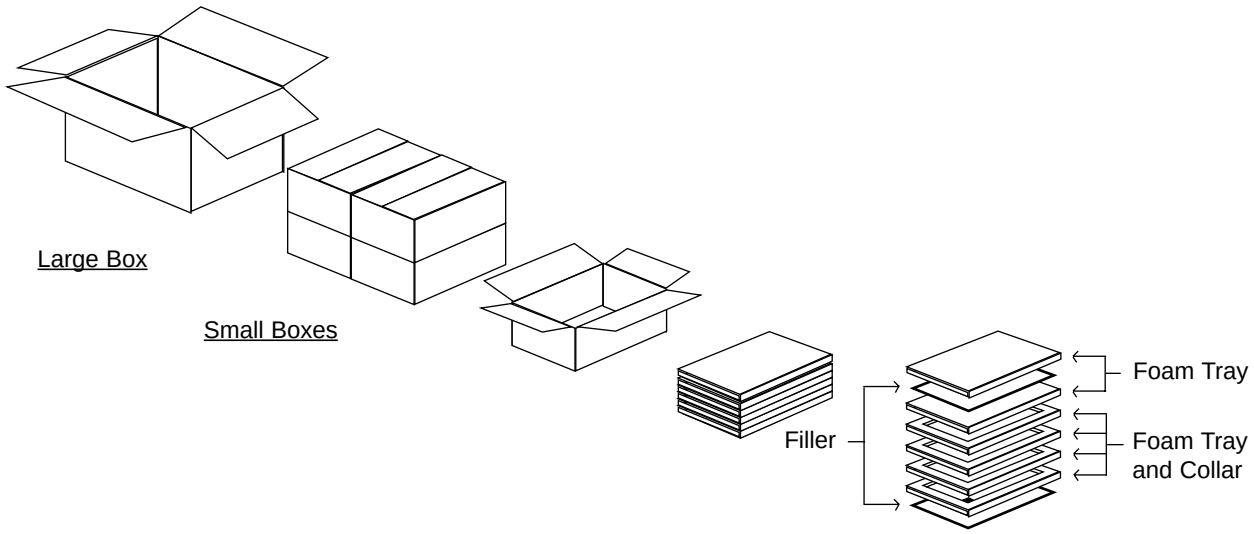
STANDARD PACKAGING (Fig. 9)



Packaging

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

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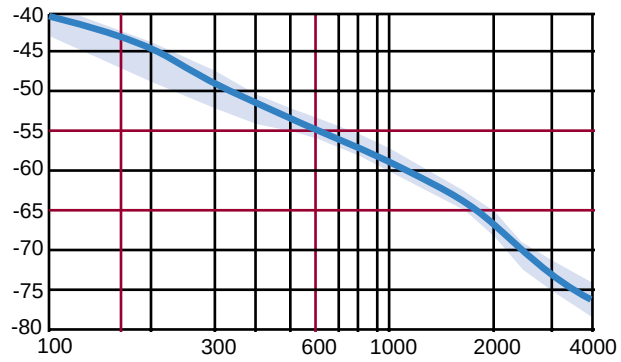
PERFORMANCE DATA

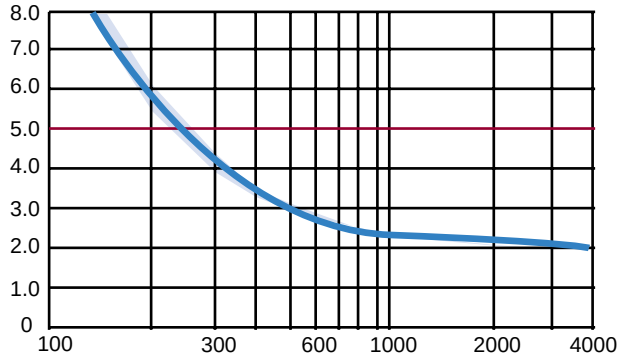
TOTAL HARMONIC DISTORTION (Fig. 5)



Note y-axis.

INSERTION LOSS (Fig. 6)

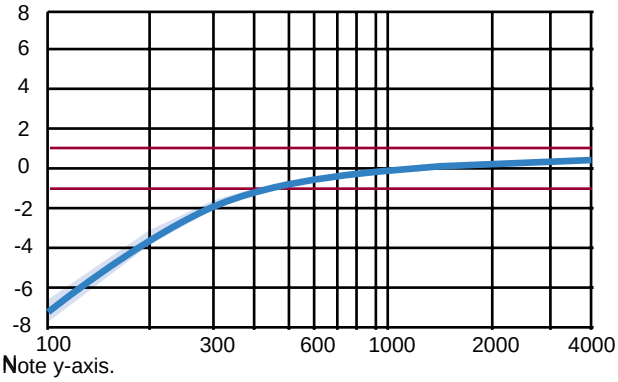
Typical Insertion Loss (dB) across Frequency (Hz)



Note y-axis.

FREQUENCY RESPONSE (Fig. 7)

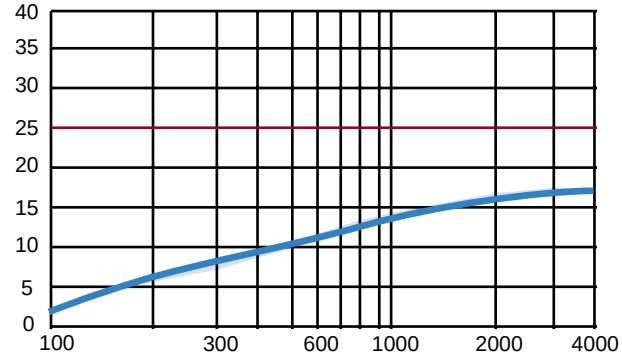
Typical Frequency Response (dB) across Frequency (Hz)



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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