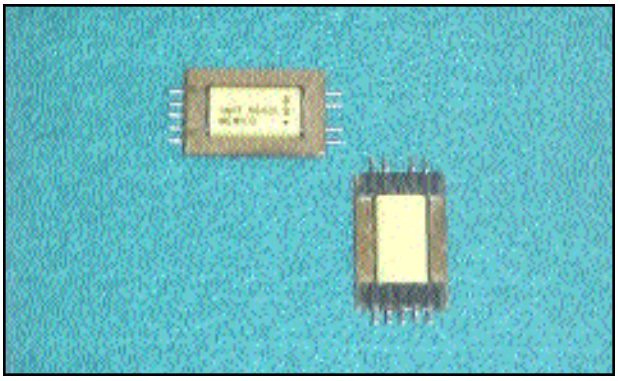
Analog Telephony / Modem Couplers



DESCRIPTION

The REMtech Magnetics SMIT-5602 is a “Dry” SMT Modem Isolation Transformer suitable for up to V.90 (56 kbps) consumer and internet analog modem applications compliant with Domestic safety norms.

SMIT-5602 is our industry’s first transformer in a thin (PCMCIA) profile capable of exceeding 56K distortion standards. Typical applications are PCMCIA cards, and Laptops, especially of soft-modem design.

For IEC60950 Supplementary safety, see SMIT-6602.

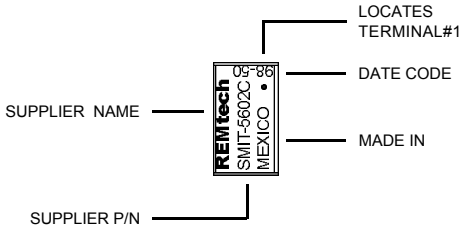
FEATURES

- Suitable for modem speeds up to V.90 (56 kbps).
- Total Harmonic Distortion rated -90 dB typ. @ 600 Hz, -10 dBm and -80 dB typ. @ 150 Hz, -3 dBm.
- Insertion Loss rated 3.60 dB typ. @ 1000 Hz.
- Complies with UL1459 safety norms.
- Reflects 600 Ohms on Primary with 200 Ohms Secondary Load.
- Very small PCB footprint (25.5 mm x 14.0 mm).
- Thin (PCMCIA) Profile (4.4 mm).
- SMT Industry-standard pin configurations.

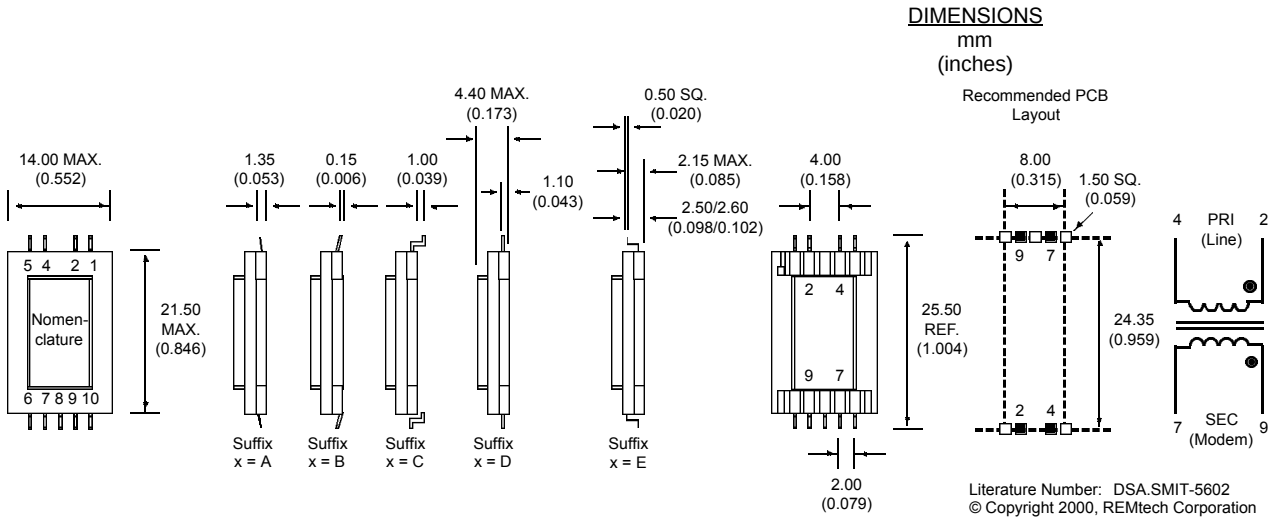
PRODUCT COMPLIANCE

- UL / C-UL recognized file number: E171120

NOMENCLATURE (Fig. 1)



MECHANICAL DIMENSIONS (Fig. 2)



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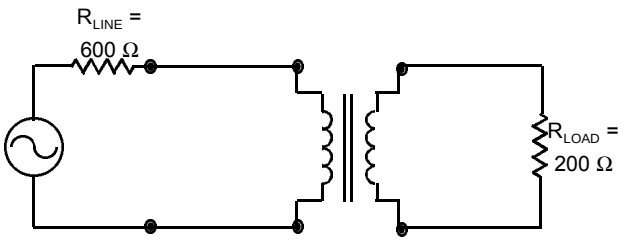
ELECTRICAL PERFORMANCE SPECIFICATIONS

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

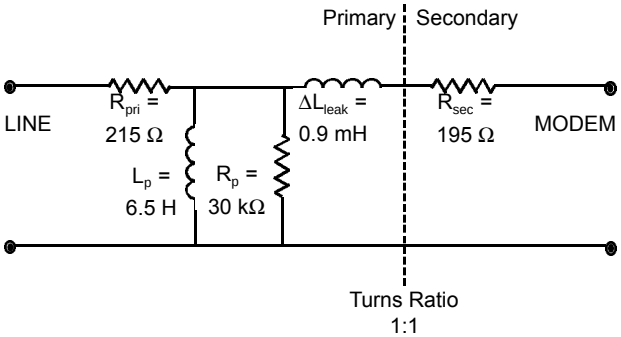
PARAMETERS	CONDITIONS	MIN	TYP	MAX	UNITS
Impedance	Reflected on Primary With Load on Secondary	- -	600 200	- -	Ohms Ohms
Total Harmonic Distortion	@ 600 Hz, -10 dBm @ 150 Hz, -3 dBm	- -	-90 -80	-85 -75	dB dB
Insertion Loss	Per IEEE method; @ 1000 Hz	-	3.60	4.00	dB
Return Loss	200 Hz - 4000 Hz Per 600 Ohm Match (Fig. 3)	25	-	-	dB
Dielectric Breakdown Isolation Production methods applied:	Safety Standard tested 1 Min. HiPot Voltage Duration Trip Leakage Current	1000 1250 2 -	- - - -	- - - 200	Vrms Vrms Sec µA
Frequency Response	200 Hz - 4000 Hz	-	±0.15	-	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	- -	215 195	- -	Ohms Ohms
DC Current in Primary	-	-	0	-	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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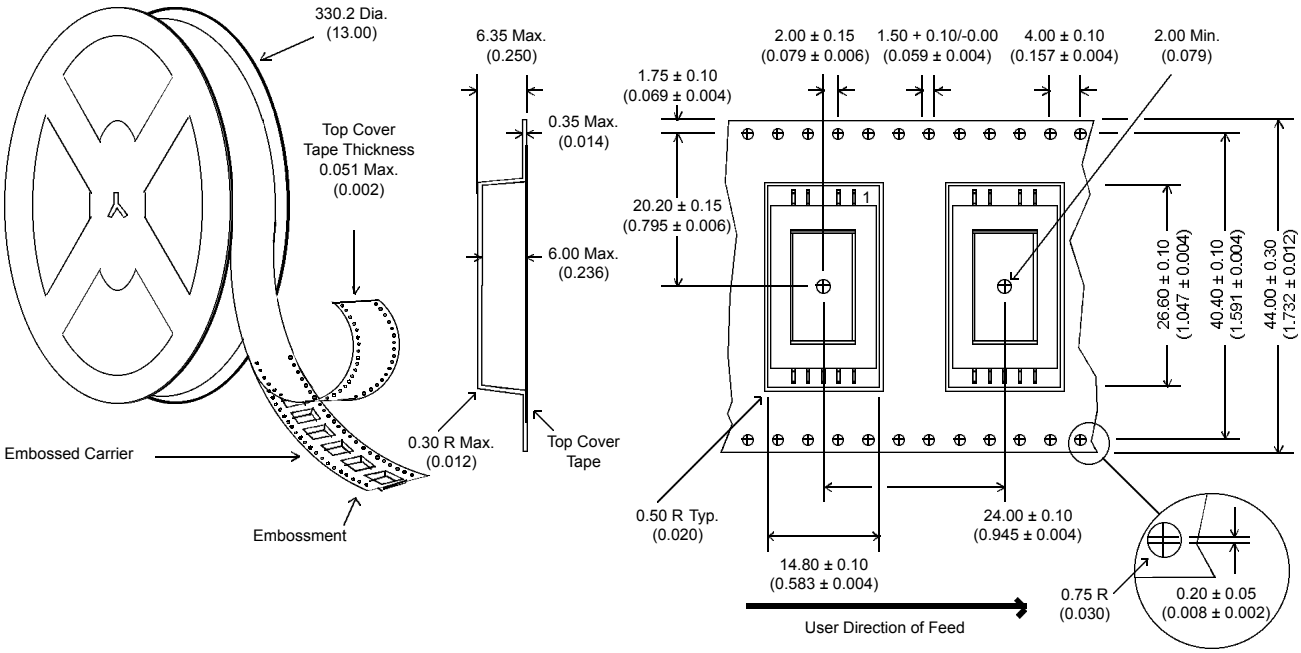
STANDARD PACKAGING (Fig. 9)

Tape and Reel Packaging for SMIT-5602



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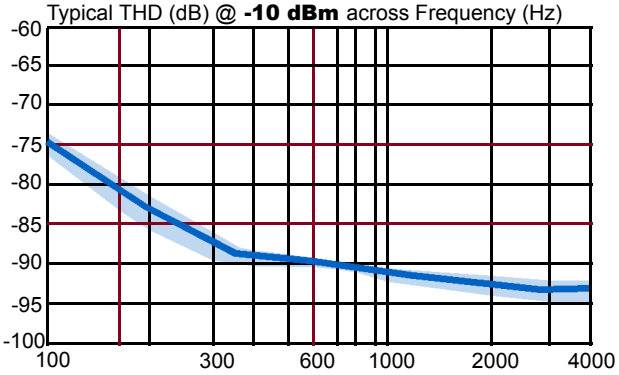
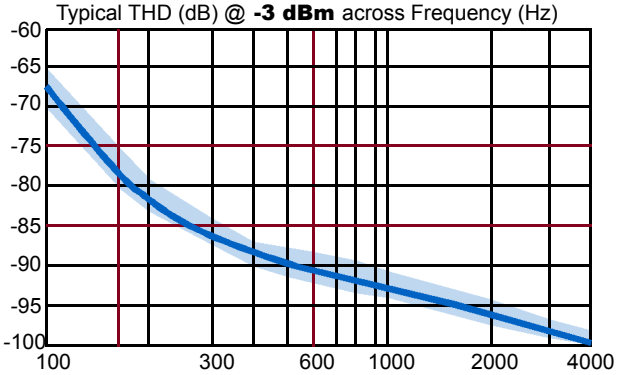
PERFORMANCE DATA

TOTAL HARMONIC DISTORTION (Fig. 5)

Typical THD (dB) @ **-10 dBm** across Frequency (Hz)

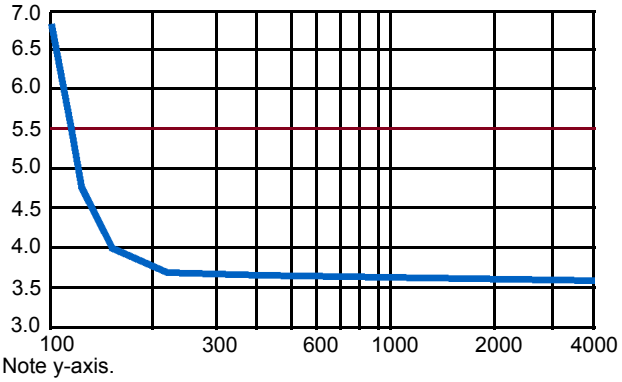


Typical THD (dB) @ **-3 dBm** across Frequency (Hz)



INSERTION LOSS (Fig. 6)

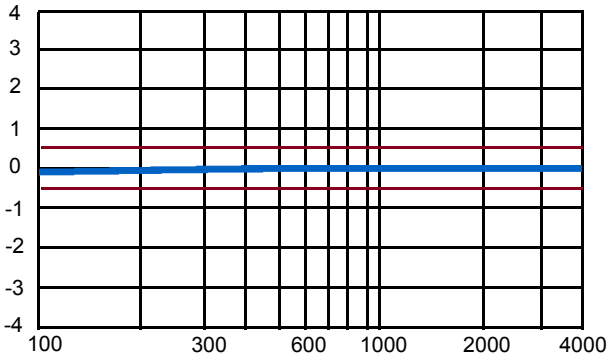
Typical Insertion Loss (dB) across Frequency (Hz)



Note y-axis.

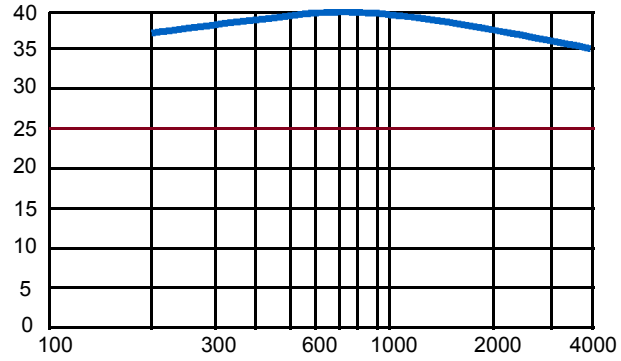
FREQUENCY RESPONSE (Fig. 7)

Typical Frequency Response (dB) across Frequency (Hz)



RETURN LOSS (Fig. 8)

Typical Return Loss (dB) across Frequency (Hz)



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