Analog Telephony / Modem Couplers

Photo to come

DESCRIPTION

The REMtech SMIT-3451 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-3451 is designed for low insertion loss requirements.

Watch for upcoming Worldwide safety version complying with IEC60950 Supplementary safety standards.

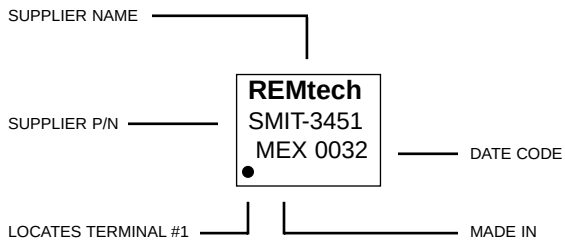
FEATURES

- Suitable for modem speeds up to V.90 (56 kbps).
- Total Harmonic Distortion rated -85 dB typ. @ 600 Hz, -10 dBm and -56 dB typ. @ 150 Hz, -3 dBm.
- Insertion Loss rated 0.85 dB typ. @ 1000 Hz.
- Complies with UL1459 safety norms.
- Reflects 600 Ohms on Primary with 523 Ohms Secondary Load.
- Very small PCB footprint (18.5 mm x 17.4 mm).
- Very Low-Profile (10.0 mm).
- SMT Industry-standard pin configuration.

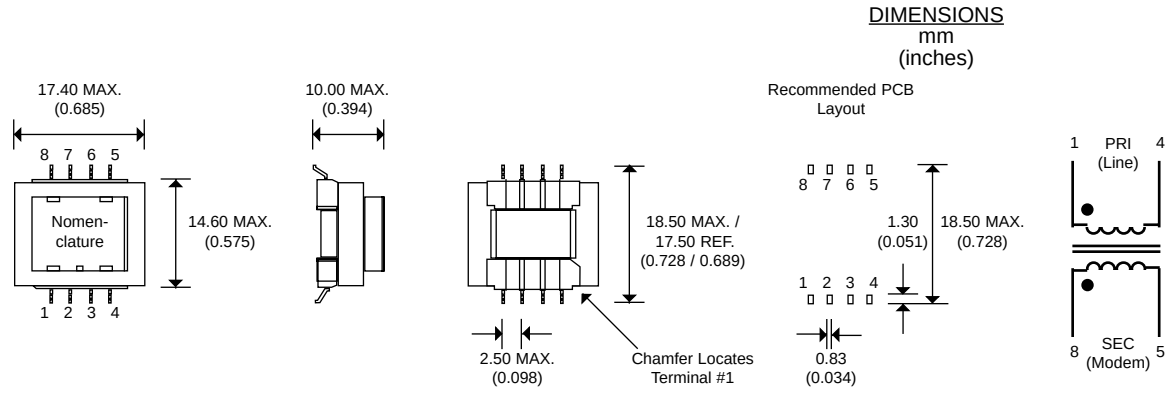
PRODUCT COMPLIANCE

- UL / C-UL recognized file number: E 171120

NOMENCLATURE (Fig. 1)



MECHANICAL DIMENSIONS (Fig. 2)



Note: Routing conductive traces under the transformer is not recommended.

Literature Number: DSA.SMIT-3451

9/00

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

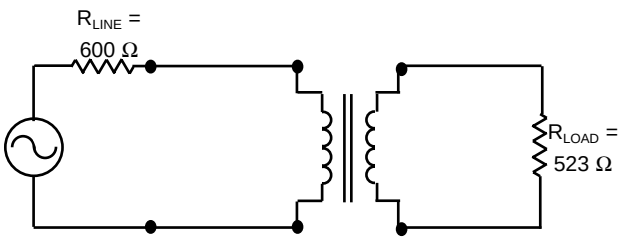
Japan
Tel: 03-3980-2212
Fax: 03-3980-2213

ELECTRICAL PERFORMANCE SPECIFICATIONS

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

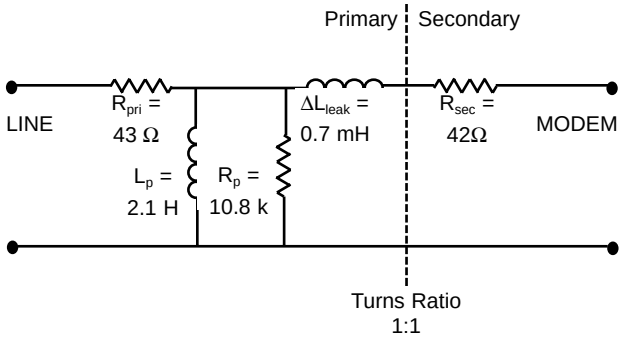
PARAMETERS	CONDITIONS	MIN	TYP	MAX	UNITS
Impedance	Reflected on Primary With Load on Secondary	- -	600 523	- -	Ohms Ohms
Total Harmonic Distortion	@ 600 Hz, -10 dBm @ 150 Hz, -3 dBm	- -	-85 -58	-76	dB dB
Insertion Loss	Per IEEE method; @ 1000 Hz	-	0.85	1.00	dB
Return Loss	200 Hz - 4000 Hz Per 600 Ohm Match (Fig. 3)	20	-	-	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	-	±0.25	-	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	- -	43 42	- -	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)



Literature Number: DSB.SMIT-3451

9/00

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

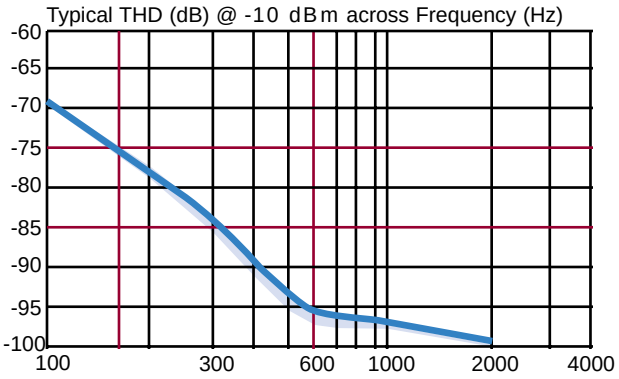
Europe
Tel: 32-11-300868
Fax: 32-11-300890

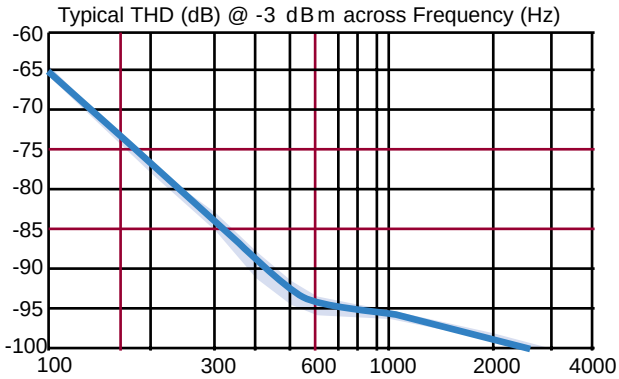
Asia
Tel: 886-2-2523-6368
Fax: 886-2-2523-6369

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

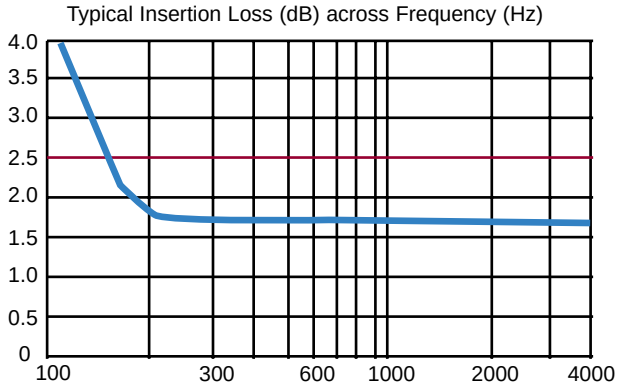
PERFORMANCE DATA

TOTAL HARMONIC DISTORTION (Fig. 5)

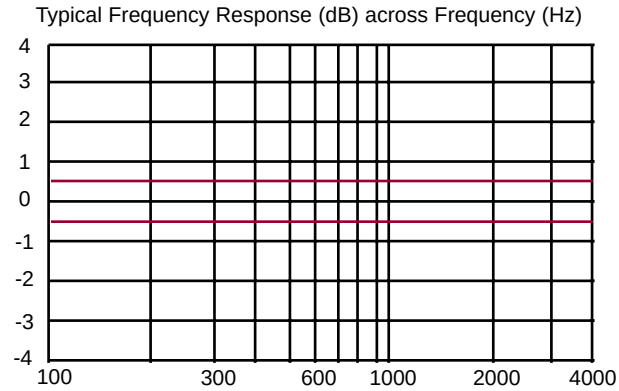




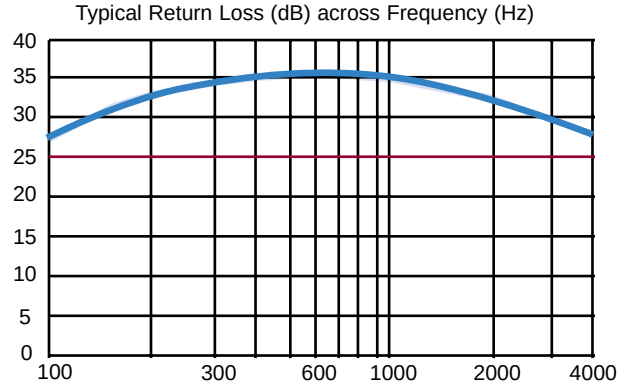
INSERTION LOSS (Fig. 6)



FREQUENCY RESPONSE (Fig. 7)



RETURN LOSS (Fig. 8)



Literature Number: DSD.SMIT-3451

9/00

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