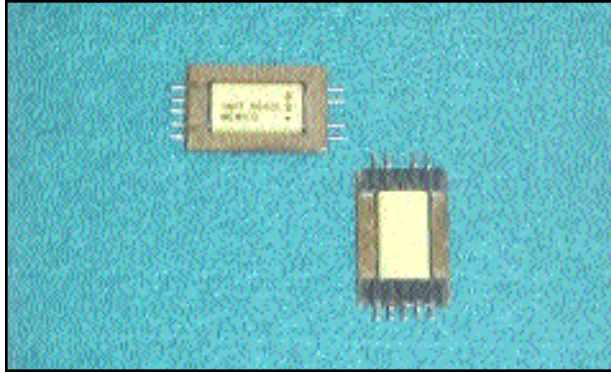


Analog Telephony / Modem Couplers



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.

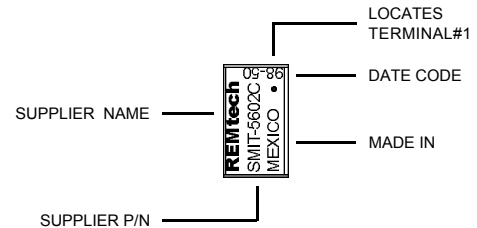
FEATURES

- 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.

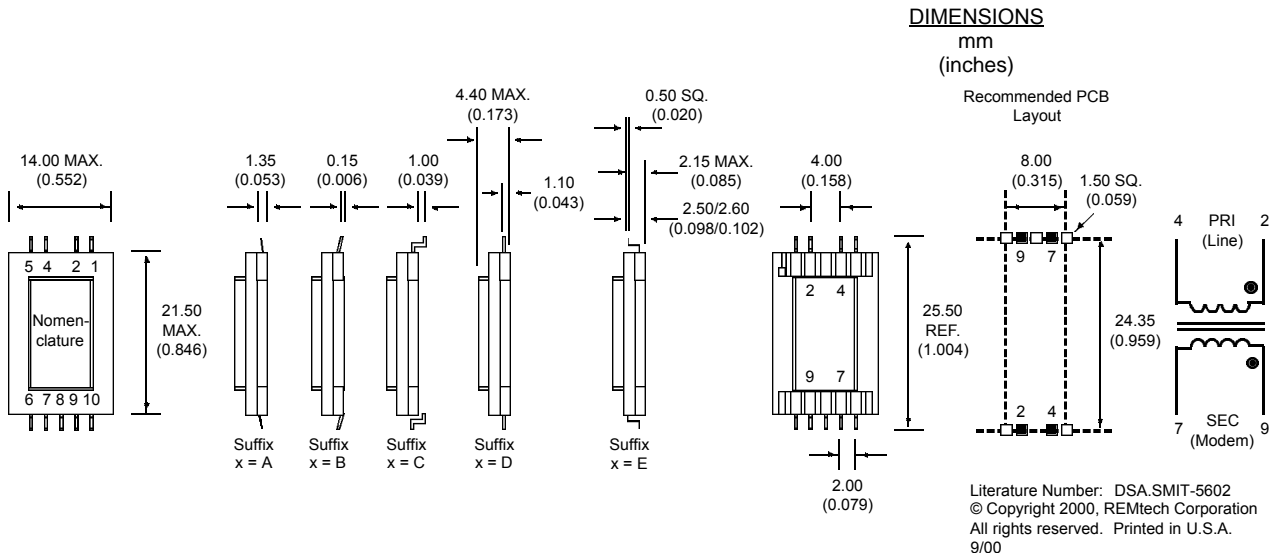
PRODUCT COMPLIANCE

- UL / C-UL recognized file number: E171120

NOMENCLATURE (Fig. 1)



MECHANICAL DIMENSIONS (Fig. 2)



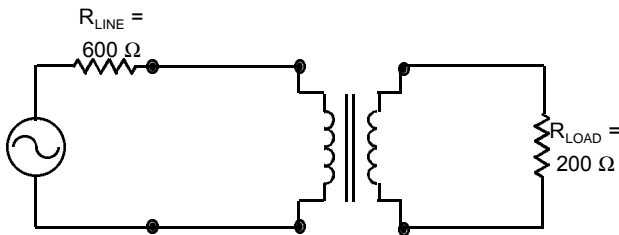
Analog Telephony / Modem Couplers

ELECTRICAL PERFORMANCE SPECIFICATIONS

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

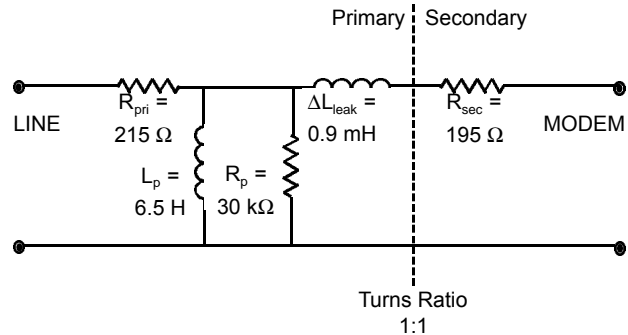
| PARAMETERS | CONDITIONS | MIN | TYP | MAX | UNITS |
|---|--|------|-------|------|-------|
| Impedance | Reflected on Primary With Load on Secondary | - | 600 | - | Ohms |
| | | - | 200 | - | Ohms |
| Total Harmonic Distortion | @ 600 Hz, -10 dBm @ 150 Hz, -3 dBm | - | -90 | -85 | dB |
| | | - | -80 | -75 | 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 | - | - | Vrms |
| | | 1250 | - | - | Vrms |
| | | 2 | - | - | Sec |
| | | - | - | 200 | 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 | - | - | dB |
| | | 40 | - | - | dB |
| DC Resistance @ 20°C, ±10% | Primary Winding Secondary Winding | - | 215 | - | Ohms |
| | | - | 195 | - | 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)

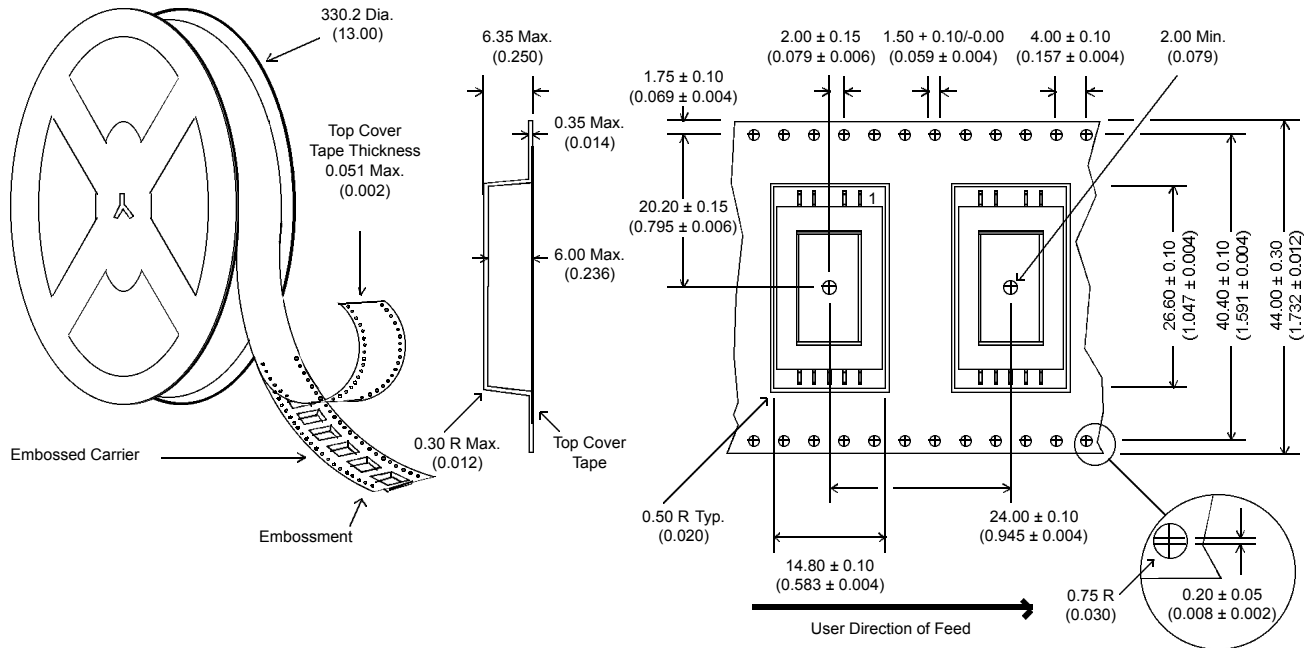


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STANDARD PACKAGING (Fig. 9)

Tape and Reel Packaging for SMIT-5602

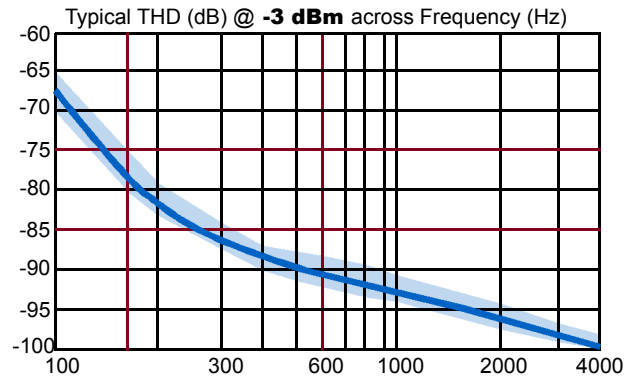
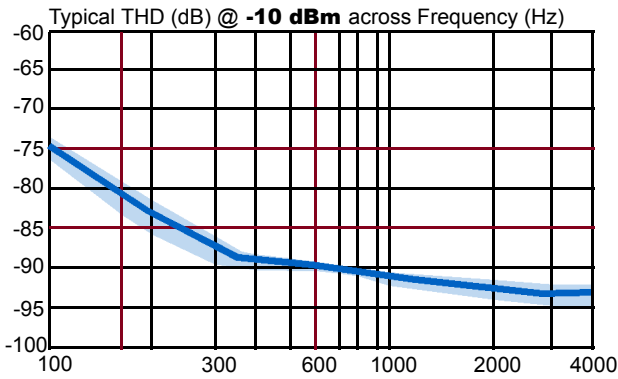


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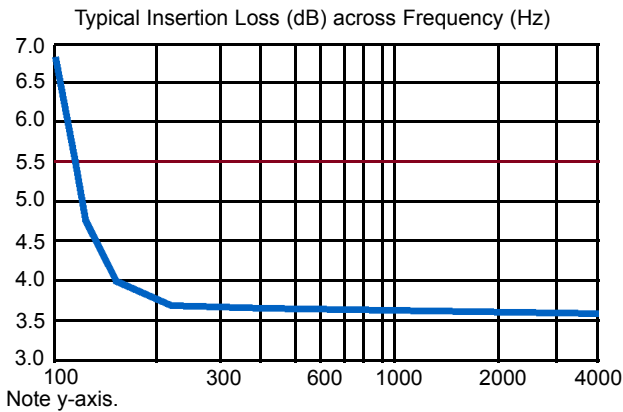
Analog Telephony / Modem Couplers

PERFORMANCE DATA

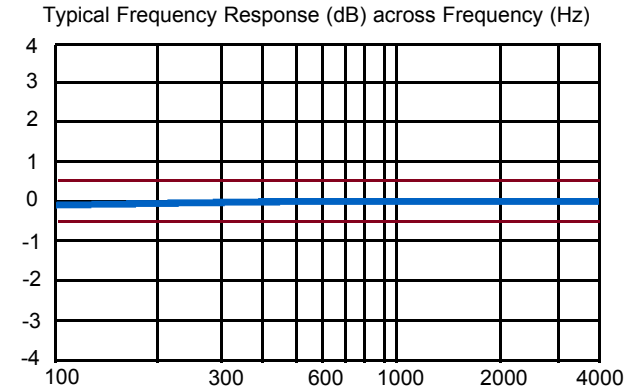
TOTAL HARMONIC DISTORTION (Fig. 5)



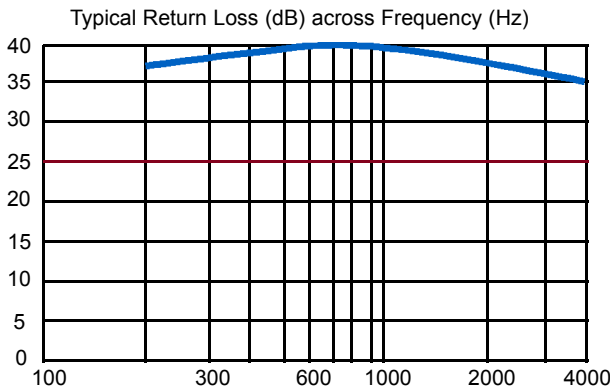
INSERTION LOSS (Fig. 6)



FREQUENCY RESPONSE (Fig. 7)



RETURN LOSS (Fig. 8)



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