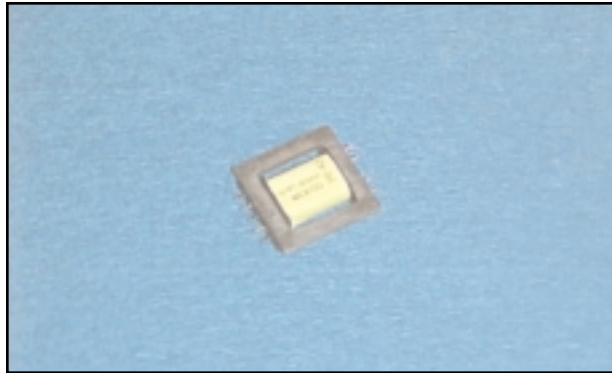


Analog Telephony / Modem Couplers



DESCRIPTION

The REMtech Magnetics SMIT-204 is a "Dry" SMT Modem Isolation Transformer suitable for up to V.32bis (14.4 kbps) consumer and internet analog modem applications compliant with Domestic safety norms. SMIT-204 may be adapted to analog modems with data rates up to V.34 (33.6 kbps).

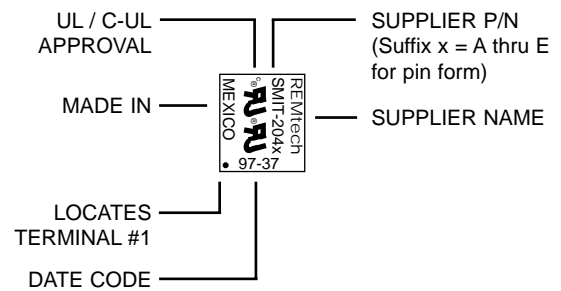
FEATURES

- Suitable for modem speeds up to V.32bis (14.4 kbps) and may be adaptable for V.34 (33.6 kbps).
- Total Harmonic Distortion rated -86 dB typ. @ 600 Hz, -10 dBm.
- Insertion Loss rated 2.65 dB typ. @ 1000 Hz.
- Complies with UL1459 safety norms.
- Reflects 600 Ohms on Primary with 294 Ohms Secondary Load.
- Very small PCB footprint (19.8 mm x 16.3 mm).
- Thin (PCMCIA) Profile (4.32 mm).
- SMT Industry-standard pin configurations.

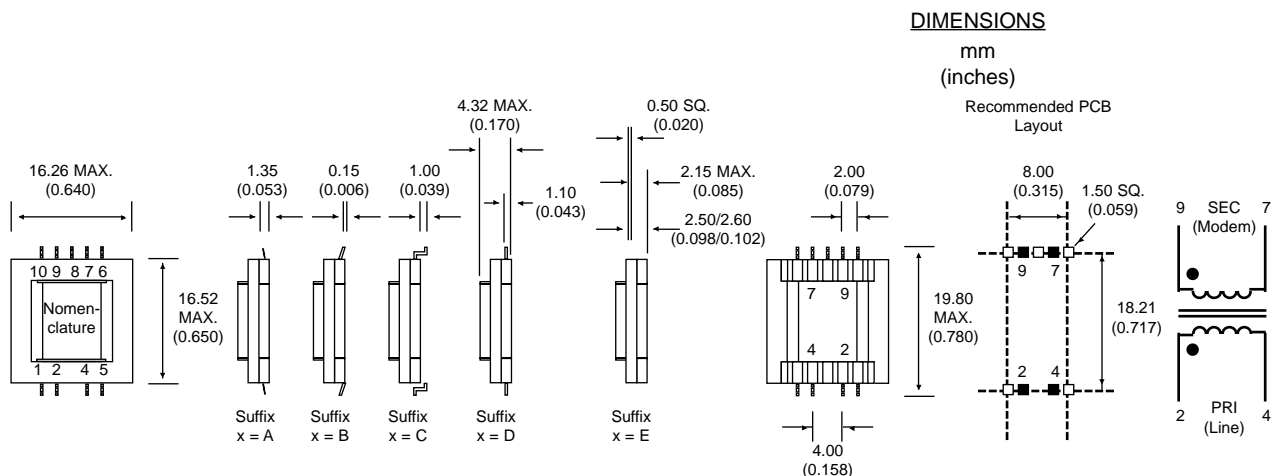
PRODUCT COMPLIANCE

- UL / C-UL recognized file number: E171120

NOMENCLATURE (Fig. 1)



MECHANICAL DIMENSIONS (Fig. 2)



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

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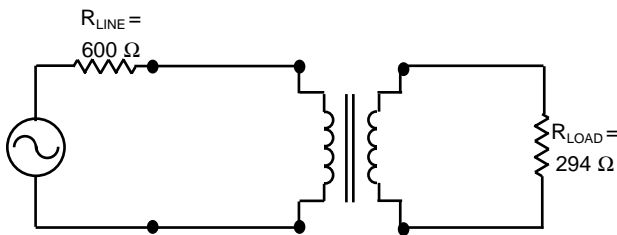
Analog Telephony / Modem Couplers

ELECTRICAL PERFORMANCE SPECIFICATIONS

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

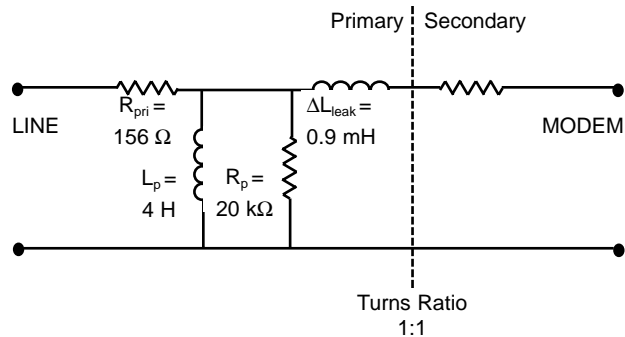
| PARAMETERS | CONDITIONS | MIN | TYP | MAX | UNITS |
|---|--|------|------------|------|------------------|
| Impedance | Reflected on Primary With Load on Secondary | - | 600 | - | Ohms |
| | | - | 294 | - | Ohms |
| Total Harmonic Distortion | @ 600 Hz, -10 dBm @ 150 Hz, -3 dBm | - | -86 | -76 | dB |
| | | - | -61 | - | dB |
| Insertion Loss | Per IEEE method; @ 1000 Hz | - | 2.65 | 3.40 | 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 | - | ± 0.25 | - | dB |
| Longitudinal Balance | Per FCC part 68.310 60 Hz - 1000 Hz 1000 Hz - 4000 Hz | 60 | - | - | dB |
| | | 40 | - | - | dB |
| DC Resistance @ 20°C , $\pm 10\%$ | Primary Winding Secondary Winding | - | 156 | - | Ohms |
| | | - | 145 | - | Ohms |
| DC Current in Primary | - | - | 0 | - | 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)

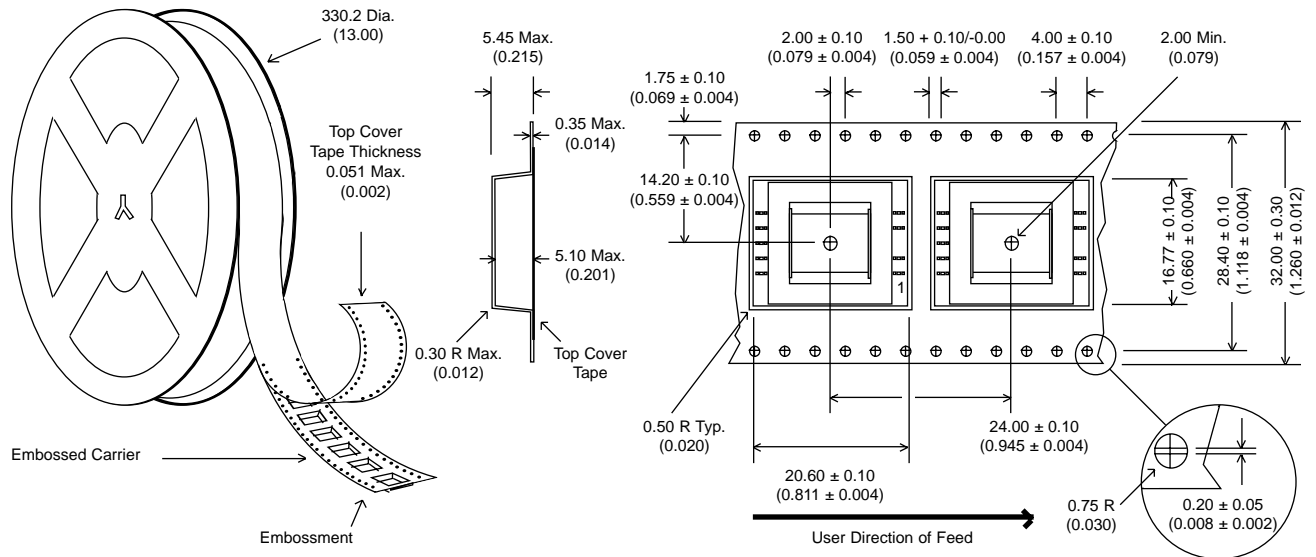


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STANDARD PACKAGING (Fig. 9)

Tape and Reel Packaging for SMIT-204

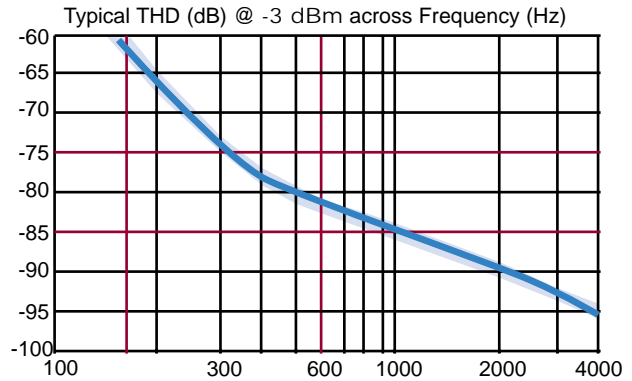
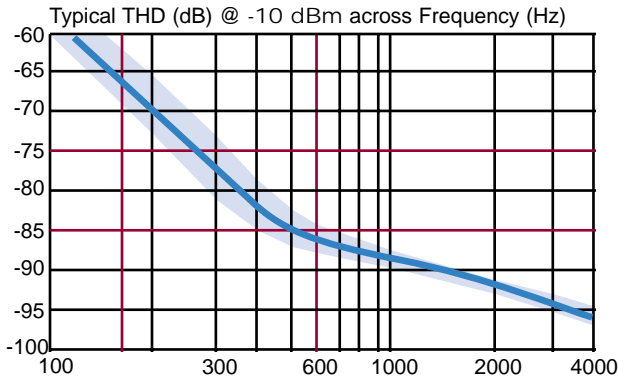


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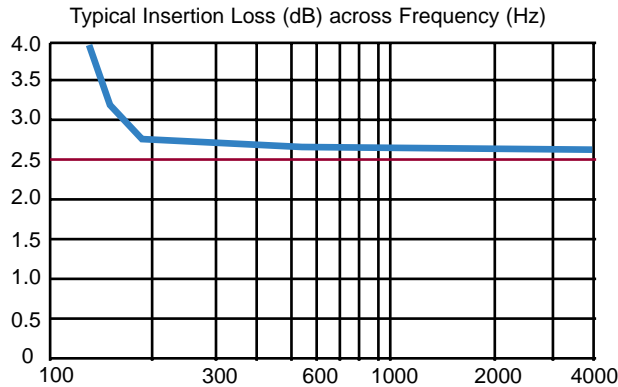
Analog Telephony / Modem Couplers

PERFORMANCE DATA

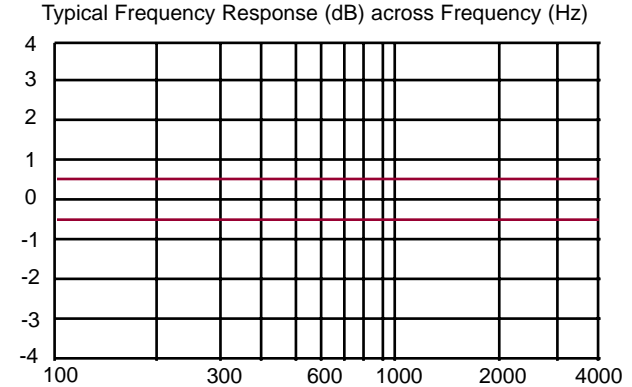
TOTAL HARMONIC DISTORTION (Fig. 5)



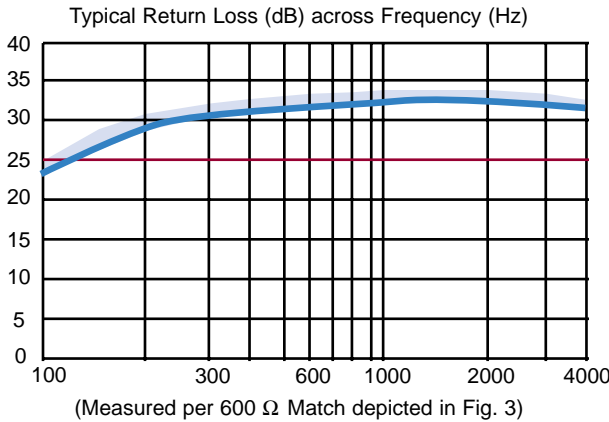
INSERTION LOSS (Fig. 6)



FREQUENCY RESPONSE (Fig. 7)



RETURN LOSS (Fig. 8)



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