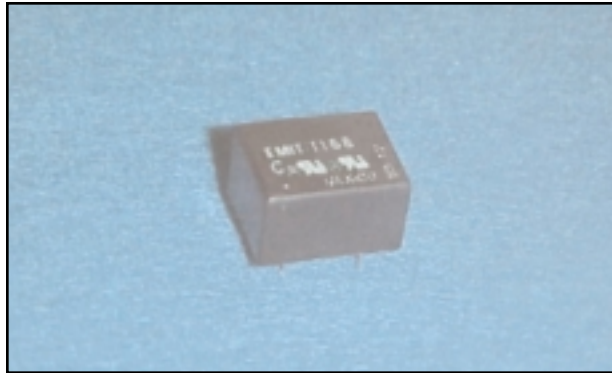


Analog Telephony / Modem Couplers



DESCRIPTION

The REMtech Magnetics EMIT-1168 is a “Dry” Encapsulated Modem Isolation Transformer suitable for up to V.32 (9.6 kbps) analog modem and voice routing applications compliant with International safety norms.

EMIT-1168 supports a popular form factor smaller than EMIT-200L for similar applications in fax machines, DBS / Set-top boxes, security systems, and electric metering.

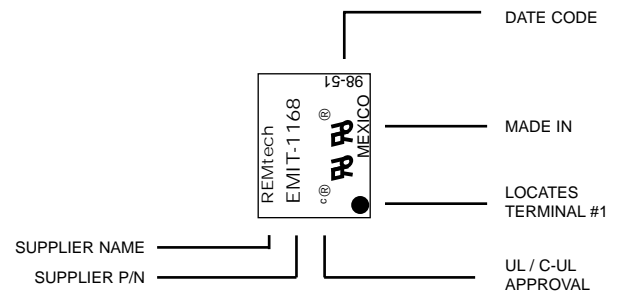
FEATURES

- Suitable for modem speeds up to V.32 (9.6 kbps).
- Total Harmonic Distortion rated -67 dB typ. @ 600 Hz, -10 dBm.
- Insertion Loss rated 1.75 dB typ. @ 2000 Hz.
- Complies with IEC60950 Reinforced safety norms.
- Matches 600 Ohm and complex impedance telephone lines.
- Uses minimal external components for impedance matching.
- Very small PCB footprint (19.2 mm x 15.0 mm).
- Very Low-Profile (11.3 mm).
- Industry-standard pin configuration.

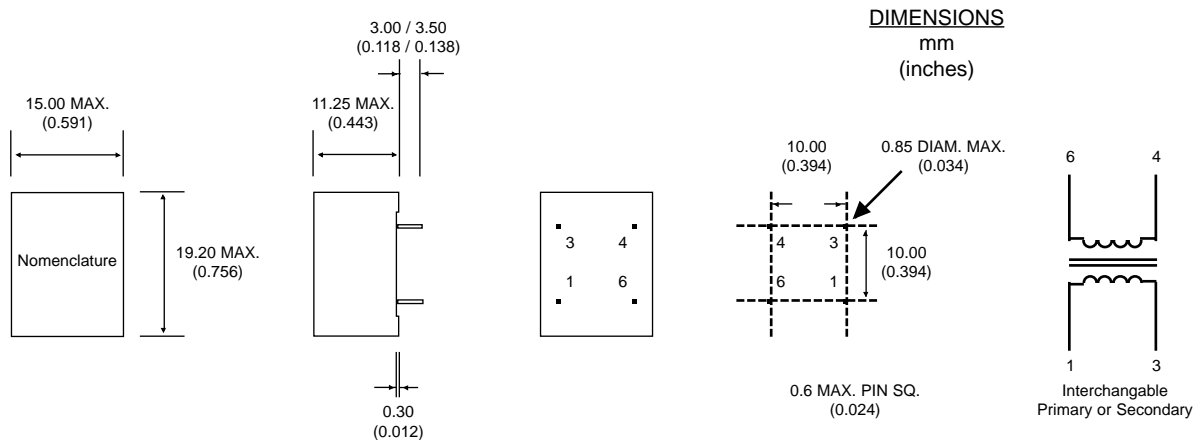
PRODUCT COMPLIANCE

- UL / C-UL recognized file number: Pending
- BSI certificate number(s): Pending
- BABT certificate of recognition: Pending

NOMENCLATURE (Fig. 1)



MECHANICAL DIMENSIONS (Fig. 2)



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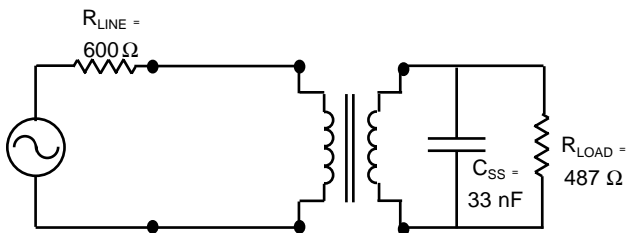
Analog Telephony / Modem Couplers

ELECTRICAL PERFORMANCE SPECIFICATIONS

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

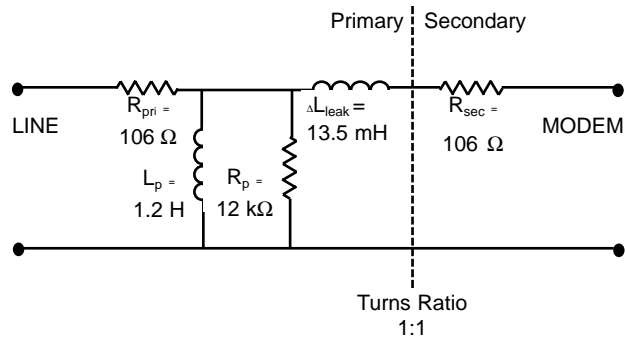
| PARAMETERS | CONDITIONS | MIN | TYP | MAX | UNITS |
|---|--|------|------------|------|------------------|
| Impedance | Reflected on Primary With Load on Secondary | - | 600 | - | Ohms |
| | | - | 487 | - | Ohms |
| Total Harmonic Distortion | @ 600 Hz, -10 dBm | - | -67 | -60 | dB |
| Insertion Loss | Per IEEE method; @ 2000 Hz | - | 1.75 | 2.00 | dB |
| Return Loss | 200 Hz - 4000 Hz Per 600 Ohm Match (Fig. 3) Per CTR21 Pan-Euro Match (Fig. 10) | 16 | - | - | dB |
| | | 25 | - | - | dB |
| Dielectric Breakdown Isolation Production methods applied: | Safety Standard tested 1 Min. | 3000 | - | - | Vrms |
| | HiPot Voltage | 3750 | - | - | Vrms |
| | Duration | 2 | - | - | Sec |
| | Trip Leakage Current | - | - | 200 | μA |
| Frequency Response | 200 Hz - 4000 Hz | - | ± 0.30 | - | 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 | - | 106 | - | Ohms |
| | Secondary Winding | - | 106 | - | 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)

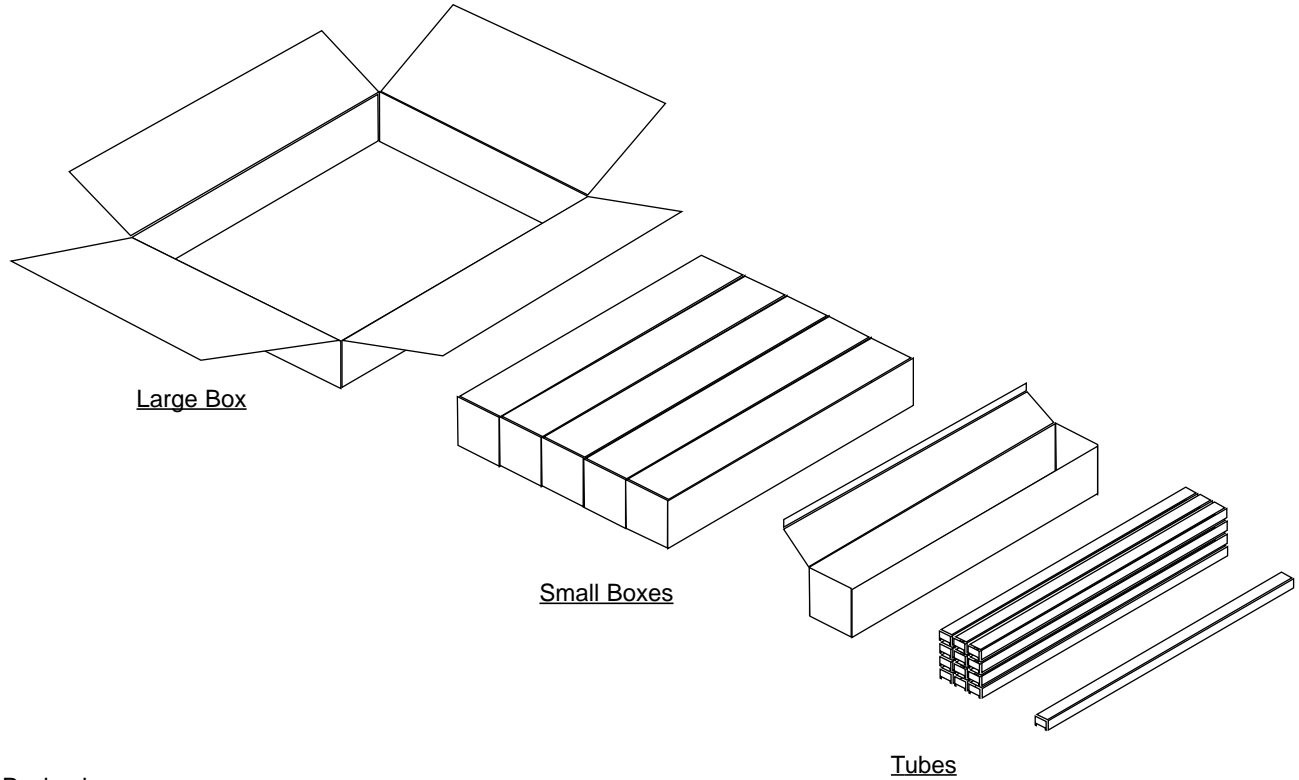
(Typical Transformer Model @ 1 V, 1 kHz)



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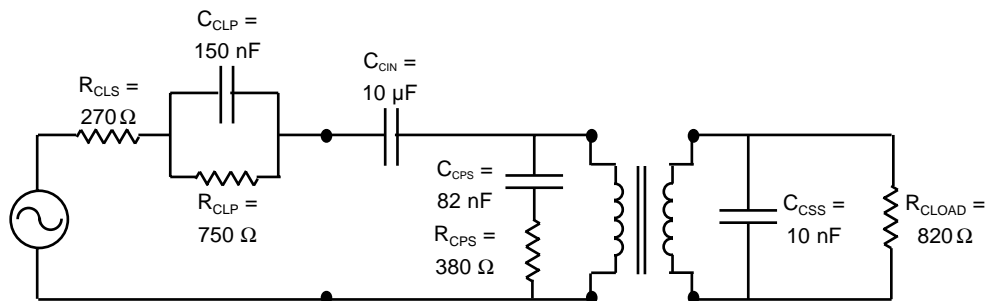
STANDARD PACKAGING (Fig. 9)



| Packaging Material | Contents | #Transformers |
|--------------------|-----------------|---------------|
| Large Box | 5 Small Boxes | 1860 |
| Small Box | 12 Tubes | 372 |
| Tube | 31 Transformers | 31 |
| --- | Transformer | 1 |

PAN-EUROPEAN CTR21 MATCH (Fig. 10)

(Application circuits available on request for specific national match requirements.)

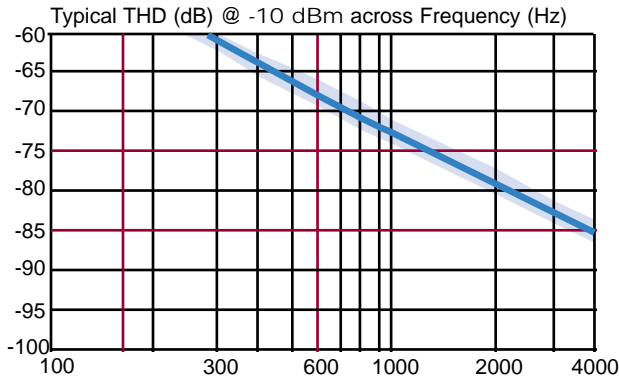


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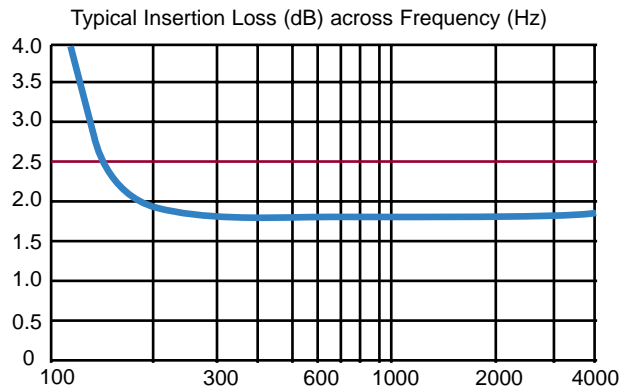
Analog Telephony / Modem Couplers

PERFORMANCE DATA

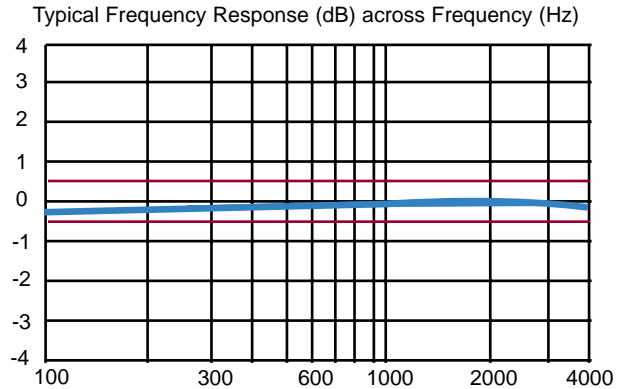
TOTAL HARMONIC DISTORTION (Fig. 5)



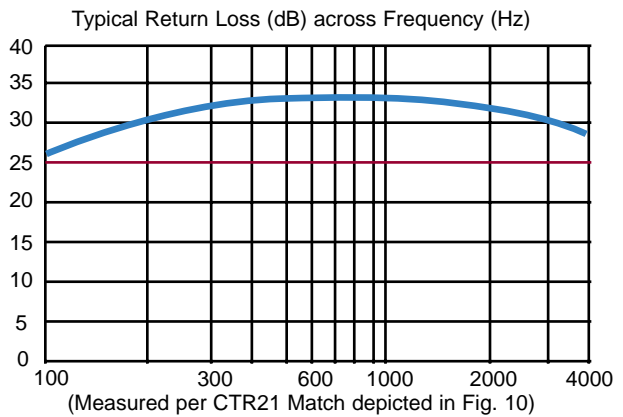
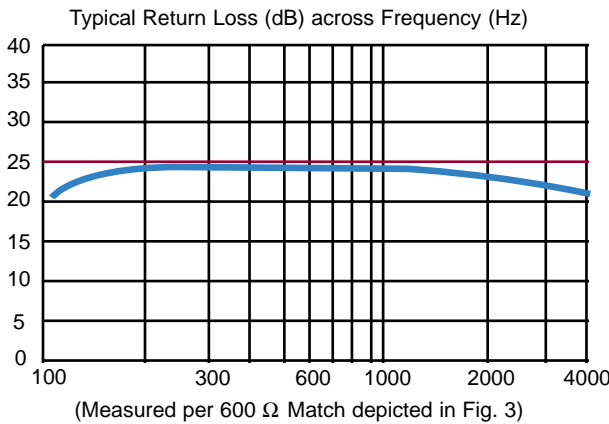
INSERTION LOSS (Fig. 6)



FREQUENCY RESPONSE (Fig. 7)



RETURN LOSS (Fig. 8)



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