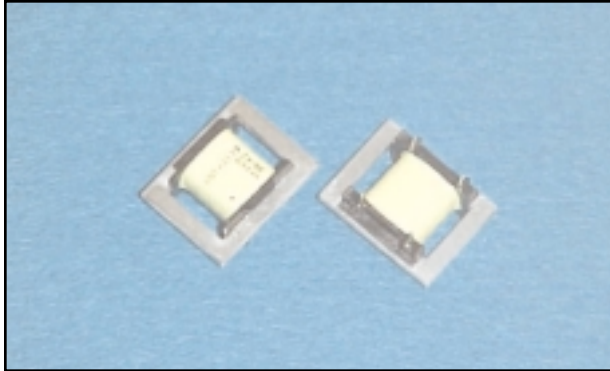


Analog Telephony / Modem Couplers



FEATURES

- Suitable for modem speeds up to V.90 (56 kbps).
- Total Harmonic Distortion rated -88 dB typ. @ 600 Hz, -10 dBm and -80 dB typ. @ 150 Hz, -3 dBm.
- Insertion Loss rated 1.95 dB typ. @ 1000 Hz.
- Complies with UL1459 safety norms.
- Reflects 600 Ohms on Primary with 374 Ohms Secondary Load.
- Small PCB footprint (20.3 mm x 26.0 mm).
- Low-Profile (12.2 mm).
- Industry-standard pin configuration.

DESCRIPTION

The REMtech Magnetics MIT-3125 is a "Dry" Modem Isolation Transformer suitable for up to V.90 (56 kbps) consumer and internet analog modem applications compliant with Domestic safety norms.

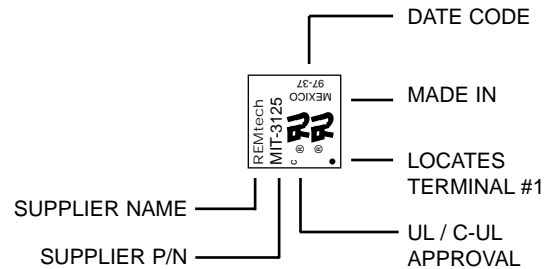
MIT-3125 replaces MIT-125 to achieve lower costs, while still meeting V.90 (56 kbps) electrical requirements. See MIT-3262 for higher performance at cost of MIT-125.

MIT-4125 is a simple "drop-in" upgrade of MIT-3125 to meet upcoming IEC60950 Supplementary worldwide safety.

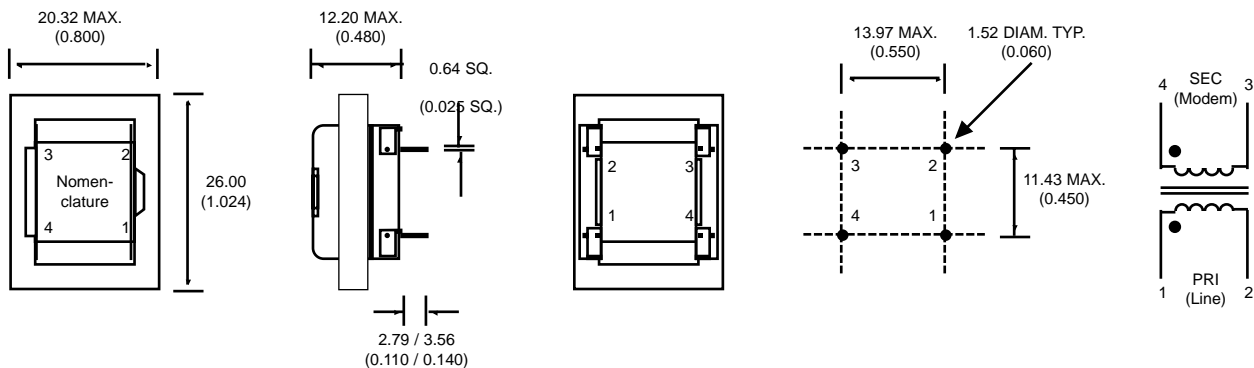
PRODUCT COMPLIANCE

- UL / C-UL recognized file number: E171120

NOMENCLATURE (Fig. 1)



MECHANICAL DIMENSIONS (Fig. 2)



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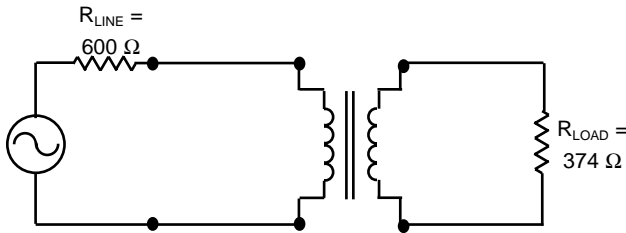
Analog Telephony / Modem Couplers

ELECTRICAL PERFORMANCE SPECIFICATIONS

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

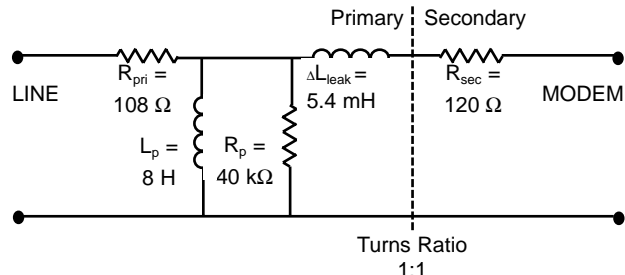
| PARAMETERS | CONDITIONS | MIN | TYP | MAX | UNITS |
|---|--|------|------------|------|------------------|
| Impedance | Reflected on Primary With Load on Secondary | - | 600 | - | Ohms |
| | | - | 374 | - | Ohms |
| Total Harmonic Distortion | @ 600 Hz, -10 dBm @ 150 Hz, -3 dBm | - | -88 | -82 | dB |
| | | - | -80 | -75 | dB |
| Insertion Loss | Per IEEE method; @ 1000 Hz | - | 1.95 | 2.25 | dB |
| Return Loss | 200 Hz - 3000 Hz Per 600 Ohm Match (Fig. 3) | 18 | - | - | 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 | - | 108 | - | Ohms |
| | | - | 120 | - | 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)

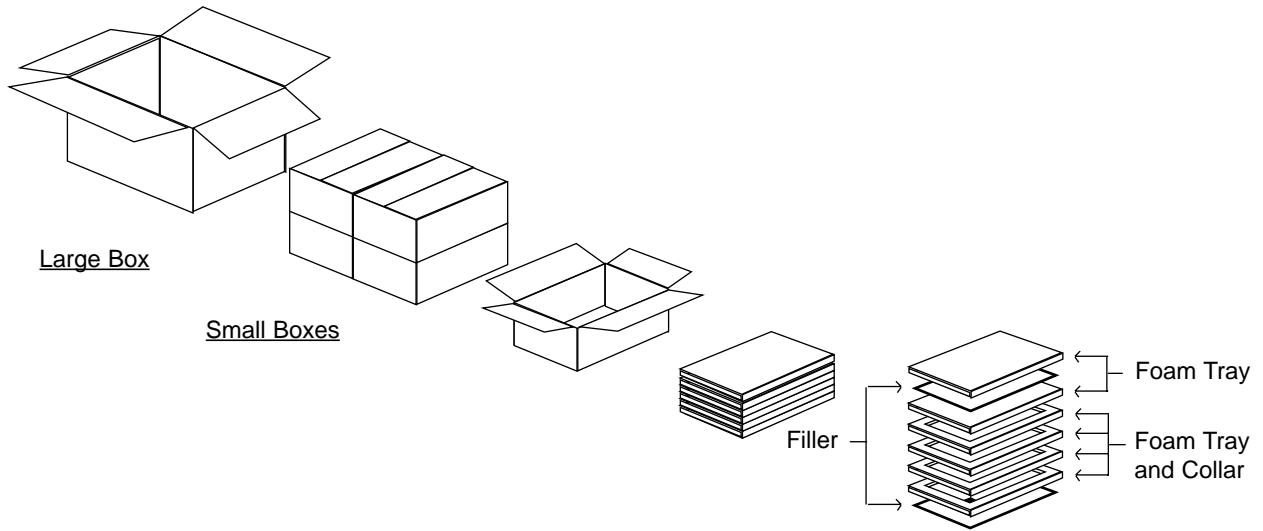


| Typical Values @ 1V | 150 Hz | 200 Hz | 1 kHz | 2 kHz |
|---------------------------------------|--------|--------|-------|-------|
| Shunt Inductance (L_p) H | 23.4 | 20.0 | 8.0 | 6.4 |
| Shunt Loss (R_p) $\text{k}\Omega$ | 21 | 23 | 40 | 55 |

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STANDARD PACKAGING (Fig. 9)



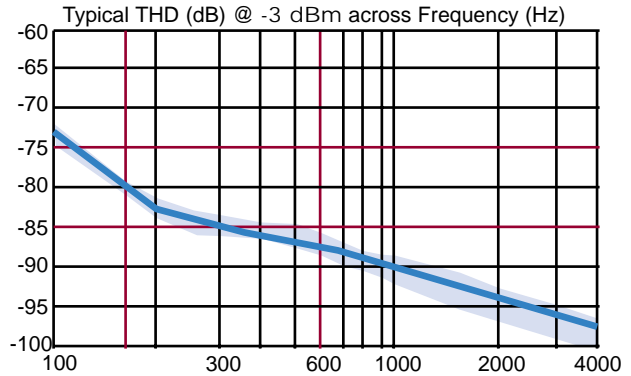
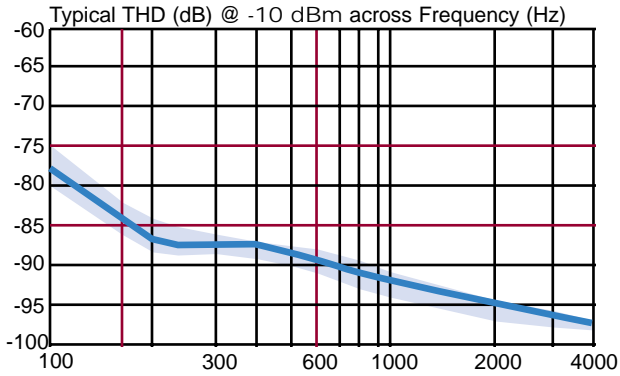
Packaging

| Material | Contents | #Transformers |
|-----------|-----------------|---------------|
| Large Box | 4 Small Boxes | 1280 |
| Small Box | 4 Trays | 320 |
| Tray | 80 Transformers | 80 |
| --- | Transformer | 1 |

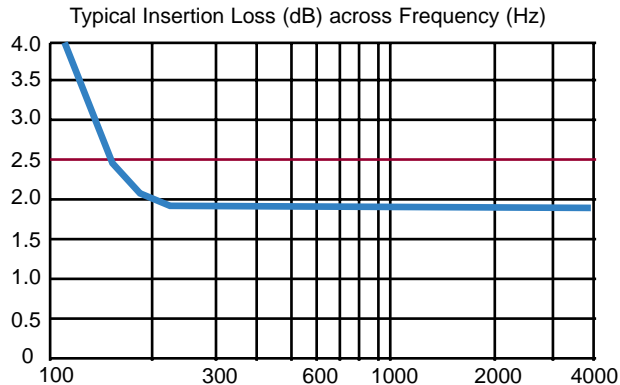
Analog Telephony / Modem Couplers

PERFORMANCE DATA

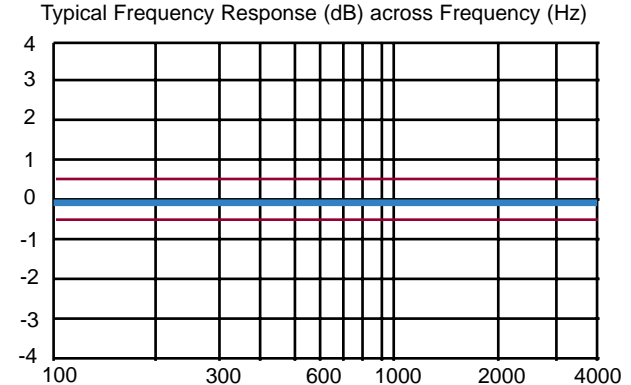
TOTAL HARMONIC DISTORTION (Fig. 5)



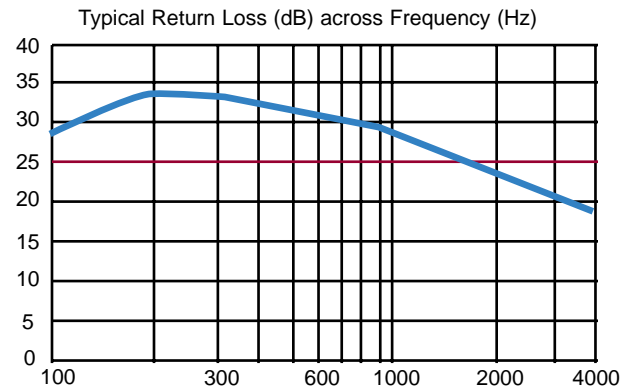
INSERTION LOSS (Fig. 6)



FREQUENCY RESPONSE (Fig. 7)



RETURN LOSS (Fig. 8)



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