



sumida ESMIT-3356

Analog Telephony/Modem Couplers

FEATURES

- Suitable for modem speeds up to V.92 (56 kbps).
- Total Harmonic Distortion rated -94 dB typ. @ 600 Hz, -10 dBm; and -78 dB typ. @ 150 Hz, -3 dBm.
- Insertion Loss rated 3.20 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.
- Ultra-small PCB footprint (14.65mm x 9.75mm)
- Low profile (10 mm)
- SMT Industry-standard pin configuration

DESCRIPTION

The Sumida ESMIT-3356 is a "Dry" Encapsulated SMT Modem Isolation Transformer suitable for up to V.92 (56 kbps) analog modem and voice applications requiring SMT and small PCB footprint. ESMIT-3356 complies with international safety norms, EN60950

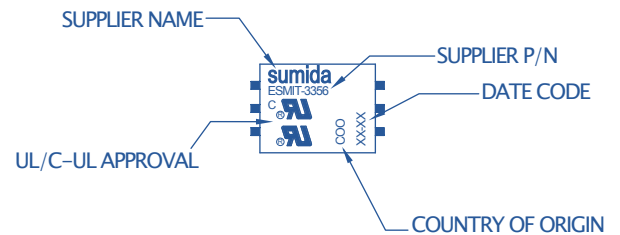
Typical applications for ESMIT-3356 include computer telephony routers, remote access servers, and boards with gangs of telephone interface circuits requiring ESMIT-3356's small footprint, but not thin profile.

PRODUCT COMPLIANCE

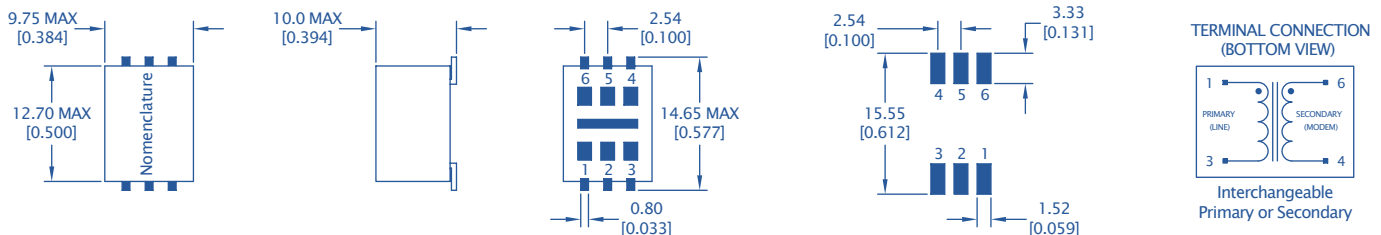
- UL/C- UL recognized file number: E171120
- BABT certificate of recognition: 1905/2080/2081
- TÜV certificate of recognition: B0112 45749 001



NOMENCLATURE (FIG. 1)



MECHANICAL DIMENSIONS (FIG. 2)



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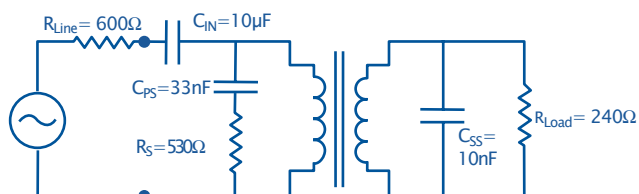
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ELECTRICAL PERFORMANCE SPECIFICATIONS

Parameters	Conditions	Min	Typ	Max	Units
Impedance	Reflected on Primary with load on Secondary		600 240		Ohms
Total Harmonic Distortion	@ 600 Hz, -10 dBm @150 Hz, -3 dB		-94 -78	-85 -70	dB
Insertion Loss	Per IEEE method; @2000 Hz, 20°C		3.20	3.50	dB
Return Loss	200 Hz-4000 Hz Per 600 Ohm Match (Fig. 3) Per CTR21 Pan-Euro Match (Fig.5)	18 25			dB
Dielectric Breakdown Isolation Production methods applied:	Safety Standard tested 1 min. HiPot Voltage Duration Trip Leakage Current	3000 3750 2		200	Vrms Vrms Sec μA
Frequency Response	200 Hz – 4000 Hz		±0.25		dB
Longitudinal Balance	Per FCC part 68.310 60 Hz – 4000 Hz	80			dB
DC Resistance @ 20°C, ±10%	Primary winding (R_{pri}) Secondary winding (R_{sec})		180 180		Ohms
DC current in Primary			0		mADC
Turns Ratio	Primary to Secondary; ±2%		1:1		Turns
Operating temperature		0		70	°C
Storage temperature		-40		125	°C
Soldering temperature	10 Sec. Max: suitable for IR reflow			240	°C

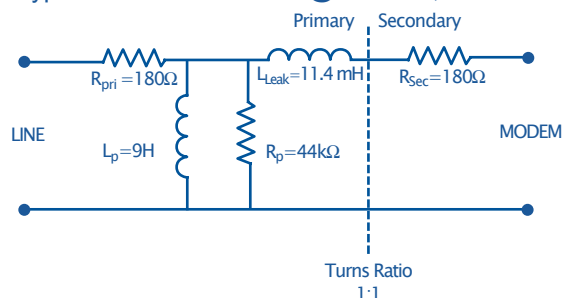
Electrical Performance Specifications (TA = 25°C unless otherwise specified)

600 OHM MATCH (FIG.3)



SCHEMATIC EQUIVALENT (FIG.4)

Typical transformer model @1000 Hz, 1.0 Vrms



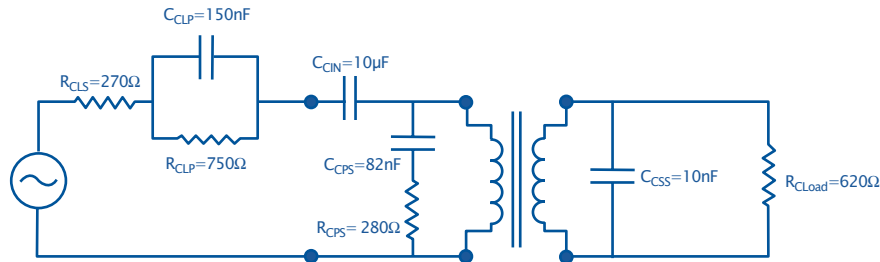
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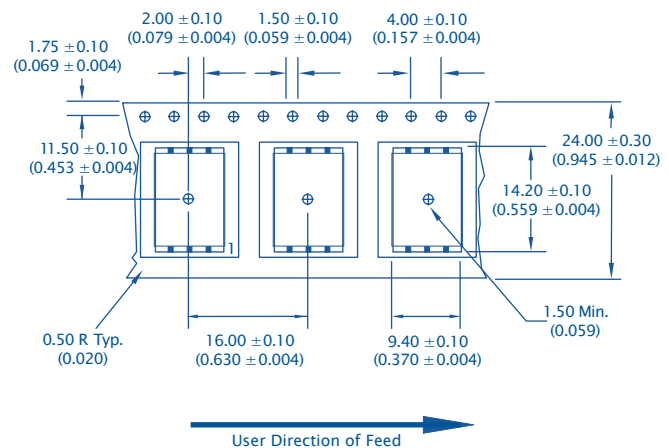
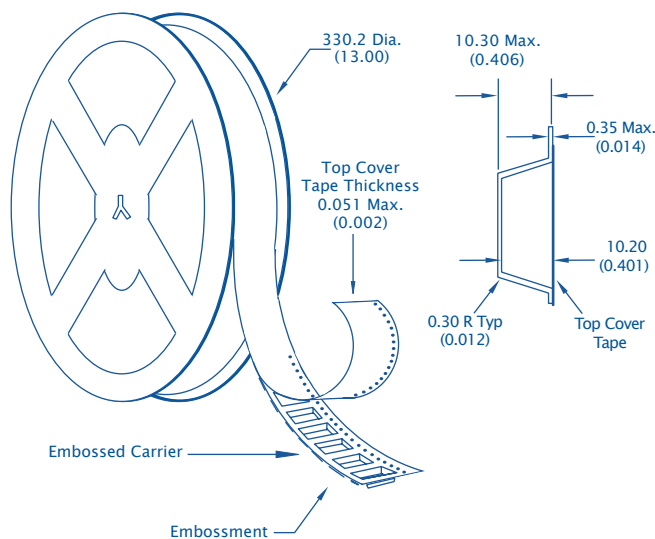


PAN-EUROPEAN CTR21 MATCH (FIG.5)

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



TAPE AND REEL PACKAGING (FIG.6)

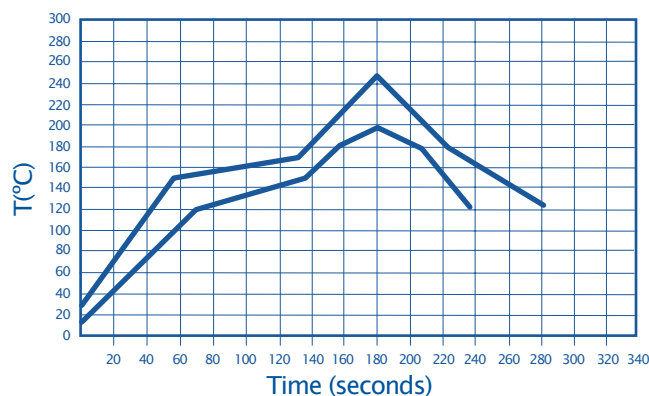


→ User Direction of Feed

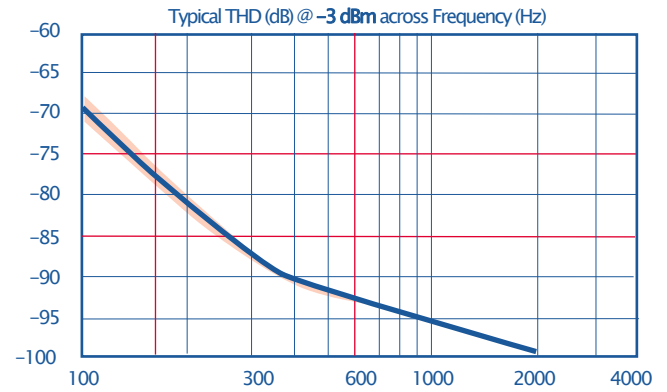
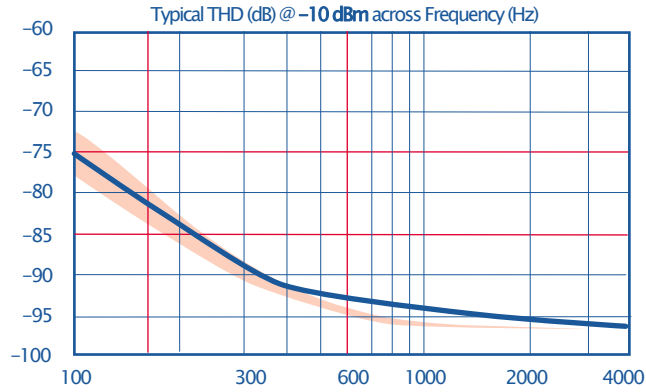
PACKAGING

Material	Contents	#Transformers
Tape	1 Reel	500

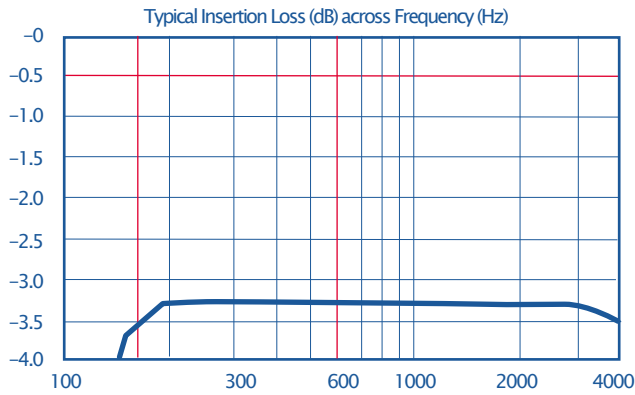
TYPICAL REFLOW PROFILE



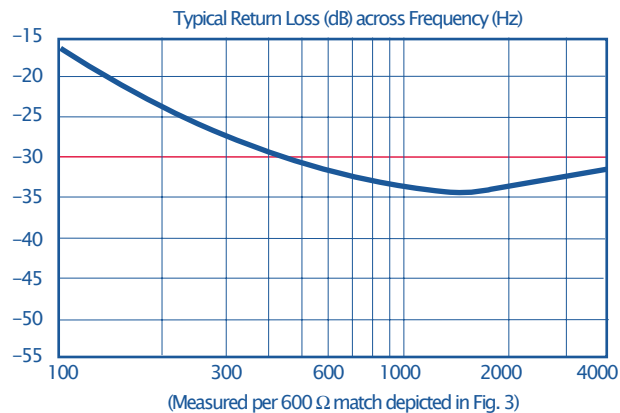
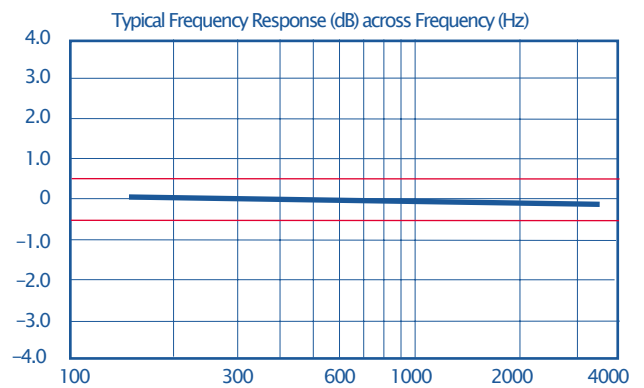
TOTAL HARMONIC DISTORTION



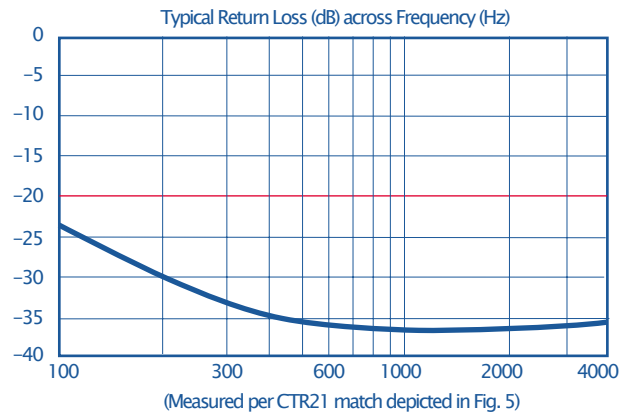
INSERTION LOSS



FREQUENCY RESPONSE



RETURN LOSS



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