

**D10006
SD10006**

DSL Isolation Transformer

FEATURES

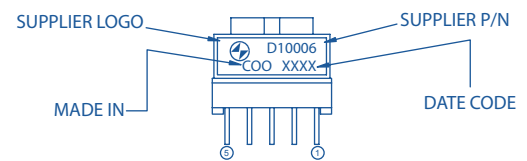
- For top-performance in ADSL modem line interfaces.
- Drop in replacement for EP13.
- Total Harmonic Distortion rated -87dB, typ. between 30kHz-200kHz.
- Insertion Loss rated 0.3dB typ. @ 300kHz.
- Return Loss rated 19.9dB typ. @ 300kHz.
- Longitudinal Balance 82.2dB typ. between 30kHz-1.1 MHz.
- Complies with supplementary insulation for a 250 Vrms primary line circuit according to IEC60950.
- Lower profile (10.9 mm).
- Applicable for IC models:
ALCATEL: MKT-20131/134/140/150/160/450
CENTILLIUM: CTL21DT01/L10AT01
GLOBESPAN: EL-1501 C/GS-7000
ITEX: I80134, Apollo III
LUCENT: Wildwire 12 V ADSL Full rate CO
STLC: ATU-R

PRODUCT COMPLIANCE

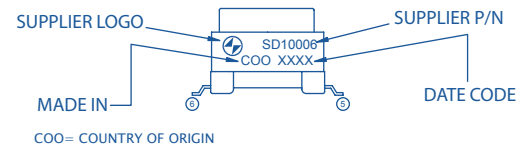
- UL/C- UL recognized file number: E171120
- BABT certificate of recognition:
- Patent Pending

NOMENCLATURE (FIG. 1)

THT

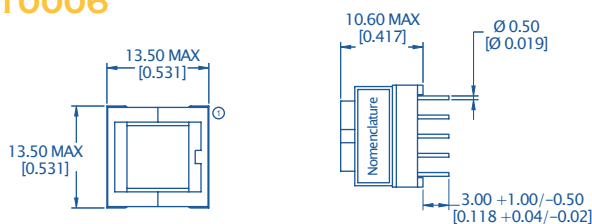


SMT

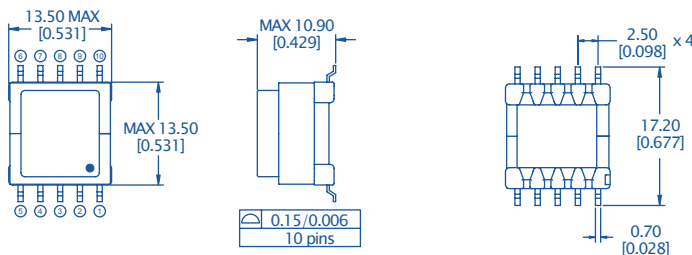


MECHANICAL DIMENSIONS (FIG. 2)

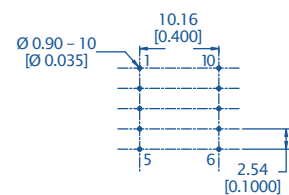
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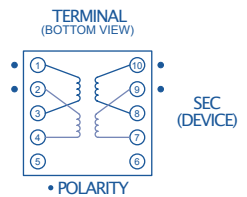
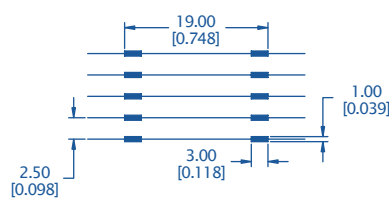
SD10006



TERMINAL LAND LAYOUT



RECOMMENDED LAND LAYOUT:



DIMENSIONS: $\frac{\text{mm}}{\text{inches}}$

Literature number: D10006 & SD10006 ©Copyright 2001, Sumida Corporation All rights reserved. Printed in U.S.A. 9/01

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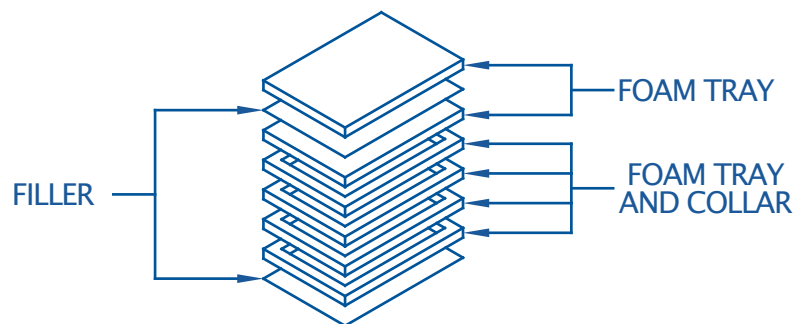
ELECTRICAL PERFORMANCE SPECIFICATIONS

Performance	Conditions	Min	Typ	Max	Units
Impedance	Reflected on Primary with load on Secondary		100 100		Ω
Total Harmonic Distortion	5.3 Vrms, 30kHz–100kHz		–87	–80	dB
Insertion Loss	@ 300 kHz		0.3	0.5	dB
Return Loss	@ 300 kHz	16.5	19.9		dB
Dielectric Breakdown Isolation Production methods applied:	Safety Standard tested 1 min. HiPOT Voltage Duration Trip Leakage Current	1500 1875 2		200	Vrms Vrms Sec μ A
Frequency Response	30 kHz –1.1MHz (Ref. 300kHz)		± 1.5	± 2.0	dB
Longitudinal Balance	30 kHz –1.1MHz	45	82.2		dB
DC Resistance @ 20°C	Primary winding (R_{pri}) Secondary winding (R_{sec})		2.8 2.8	3.2 3.2	Ω
DC current in Primary			0		mADC
Turns Ratio	Primary to secondary; $\pm 1\%$		1:1		Turns
Inductance (L_p)	10 kHz, 0.1 VAC	413.6	440	466.6	μ H
Leakage inductance (ΔL_{leak})	100 kHz, 0.1 VAC		3.92	9	μ H
Core Loss (R_p)	100 kHz, 0.1 VAC		19.7		k Ω
Interwinding Capacitance (C_{ww})	10 kHz, 0.1 VAC		18.9	32	pF
Operating temperature		–40		85	°C
Storage temperature		–40		100	°C

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

- Spice model Schematic is available on the Sumida America Web site in application note AN1002.
- GRAPHS AVAILABLE UPON REQUEST

PACKAGING



PACKAGING

Material	Contents	#Transformers
Tray	Transformer	50