ADSL Transformer P5300

Features

* Lead-free (Pb-free)
* RoHS compliant
* Low Distortion
* IEC 60950 Certified
* UL 1950 and EN 60950 Compliant
* Supplementary Insulation
* Surface Mount
* Industry Standard Footprint

Applications

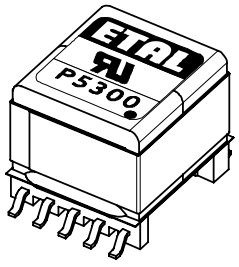
* ST/Alcatel MTK-20140, 20150, 20450
* ADSL CO and CPE over POTS

DESCRIPTION

P5300 is a low distortion transformer for ADSL CO and CPE applications over POTS.

P5300 is certified to IEC 60950 for supplementary insulation for a primary circuit, 250V working voltage, and is supported by an IEC CB Test Certificate. The part is completely lead-free, compliant with RoHS Directive 2002/95/EC, and suitable for lead-free and conventional processing.

The safety system yields very low transformer parasitics, ensuring that P5300 exhibits excellent frequency response and balance; in combination with its good harmonic distortion performance, P5300 is ideally suited to low cost yet demanding applications.



Pb
RoHS
COMPLIANT

SPECIFICATIONS

Electrical

Typical values at T = 25ºC, unless otherwise stated.

Parameter	Conditions	Min	Typ	Max	Units
Inductance	10kHz 100mV 1-5 (link 2-4)	389	409.5	430	µH
Leakage inductance	100kHz, 100mV, 1-5 (link 2-4; link 6, 7, 9, 10)	-	-	6.5	µH
Interwinding capacitance	100kHz 100mV 1-10 (link 2, 4, 5; link 7, 9, 6)	-	21	30	pF
Third Harmonic Distortion	30kHz +20dBm (3.16Vrms) in line 25 ohm source 100 ohm line (link 2-4; link 7-9)	-	-	-78	dB
DC resistance	1-5 (link 2-4) 10-6 (link 7-9)	- -	- -	1.4 0.65	Ω Ω
Turns ratio	1-5: 10-6 (link 4, 2; link 7,9)	1.96	2.00	2.04	-
Voltage isolation (1)	50Hz DC (1, 2, 4, 5 : 6, 7, 9, 10)	2.12 3.0	- -	- -	kVrms kV
Operating range: Functional Storage	Ambient temperature	 -40 -40	 - -	 +85 +85	 ºC ºC

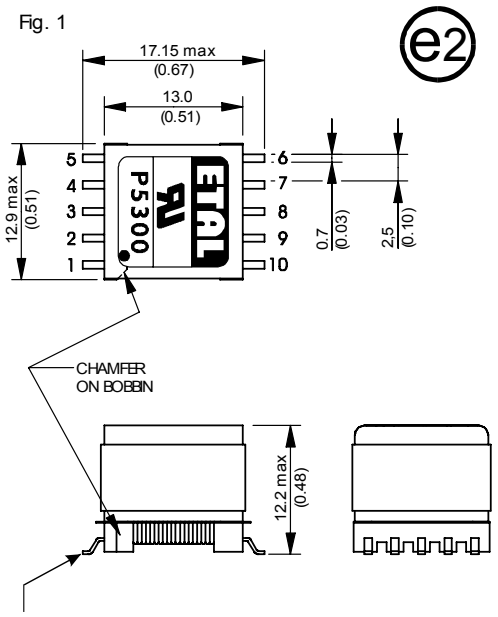
Notes

1. Components are 100% tested at 3.25kV DC

CONSTRUCTION

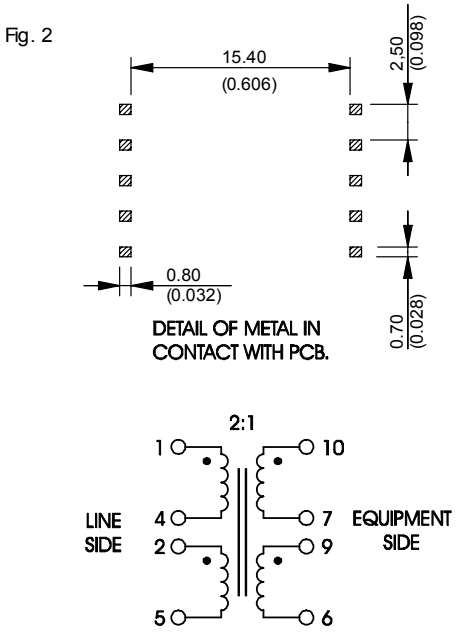
Dimensions

Fig. 1



Connections

Fig. 2



Dimensions shown are in millimetres (inches).

SAFETY

Compliant with IEC 60950:1999 and CAN/CSA C22.2 No.950-95/UL1950 Third Edition, supplementary insulation for a primary circuit, 250V maximum working voltage, flammability class V-0.

ABSOLUTE MAXIMUM RATINGS

(Ratings of components independent of circuit).

Short term isolation voltage (1s)	2.12kVrms, 3.0kVDC
Storage temperature	-40ºC to +85ºC
Reflow temperature (10s)	260ºC

CERTIFICATION

Certified under the IEC CB scheme to IEC 60950:1999 (IEC CB Test Certificate No. GB637W) sub-sections 1.5, 2.9, 2.10.3.1, 2.10.3.2, 2.10.4, 2.10.5, 2.10.5.2, 2.10.5.4, 4.5, 4.7.3, 4.7.3.1, 4.7.3.4, (class V-0) and 5.2, for a maximum working voltage of 250Vrms, nominal mains supply voltage not exceeding 300Vrms and a maximum operating temperature of +85ºC in Pollution Degree 2 environments, supplementary insulation for a primary circuit.

Certification pending under the Component Recognition Program of Underwriters Laboratories Inc. to US and Canadian requirements CAN/CSA C22.2 No. 950-95/UL1950, Third Edition, maximum working voltage 250Vrms, Pollution Degree 2, supplementary insulation for a primary circuit.

UL File number E203175

Additionally, Profec Technologies certifies all transformers as providing voltage isolation of 2.12kVrms, 3kV DC minimum. All shipments are supported by a Certificate of Conformity to current applicable safety standards.

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