PRODUCT DATA SHEET

# ADSL Transformer

# P3908

## Features

* Lead-free (Pb-free)
* Low Distortion
* IEC 950 and UL 60950 Certified
* UL Recognized Component
* Supplementary Insulation
* Surface Mount
* Industry Standard Footprint

## Applications

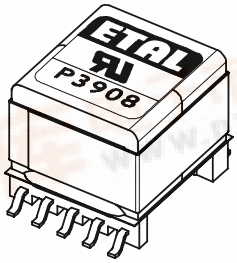
* Globespan G7000 CPE
* ADSL over POTS

## DESCRIPTION

P3908 is a low distortion transformer for Customer Premises ADSL over POTS applications using the Globespan G7000 chipset.

P3908 is certified to safety standards IEC 950 and UL 60950 for supplementary insulation, 250V working voltage. P3908 is a UL Recognized Component and is supported by an IEC CB Test Certificate.
The part is completely lead-free and suitable for lead-free and conventional processing.

The safety system yields very low transformer parasitics, ensuring that P3908 exhibits excellent frequency response and balance; in combination with its good harmonic distortion performance, P3908 is ideally suited to low cost yet demanding ADSL applications.



## SPECIFICATIONS

### Electrical

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

| Parameter | Conditions | Min | Typ | Max | Units |
|---|---|---|---|---|---|
| Inductance | 10kHz 100mV<br>1-5 (link 2-4) | 410 | 433 | 455 | µH |
| Leakage inductance | 100kHz, 100mV, 1-5<br>(link 2-4; link 6, 7, 9, 10) | - | - | 8 | µH |
| Interwinding capacitance | 100kHz 100mV<br>1-10 (link 1, 2, 4, 5;<br>link 6, 7, 9, 10) | - | - | 30 | pF |
| DC resistance | 1-4; 2-5; 6-9; 7-10 | - | 0.42 | - | Ω |
| Turns ratio | 1-4 : 2-5<br>10-7 : 9-6<br>1-4 : 10-7 | 0.99 | 1.00 | 1.01 | - |
| Frequency response (1) | 30kHz – 3MHz | - | - | ±1.0 | dB |
| Longitudinal balance (1) | 20kHz – 1.1MHz | 50 | - | - | dB |
| Total Harmonic Distortion (1) | 30kHz 2.5Vrms | - | - | -80 | dB |
| Voltage isolation (2) | 50Hz<br>DC<br>(1, 2, 4, 5 : 6, 7, 9, 10) | 2.12<br>3.0 | -<br>- | -<br>- | kVrms<br>kV |
| Operating range:<br>Functional<br>Storage | Ambient temperature | <br>-40<br>-40 | <br>-<br>- | <br>+85<br>+85 | <br>ºC<br>ºC |

### Notes

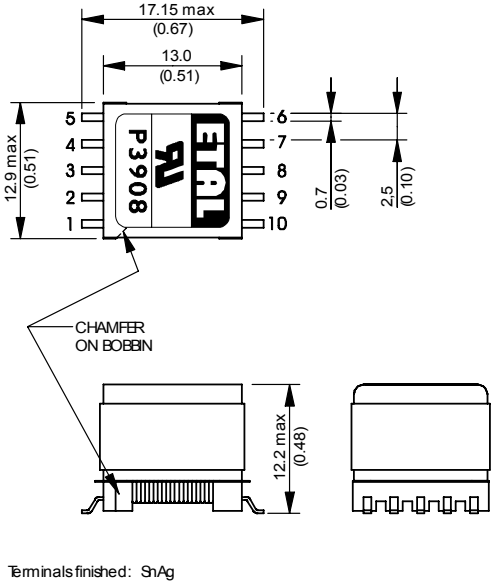
1. 100Ω source, 100Ω load.
2. Components are 100% tested at 3.25kV DC.

# P3908

## CONSTRUCTION

Dimensions

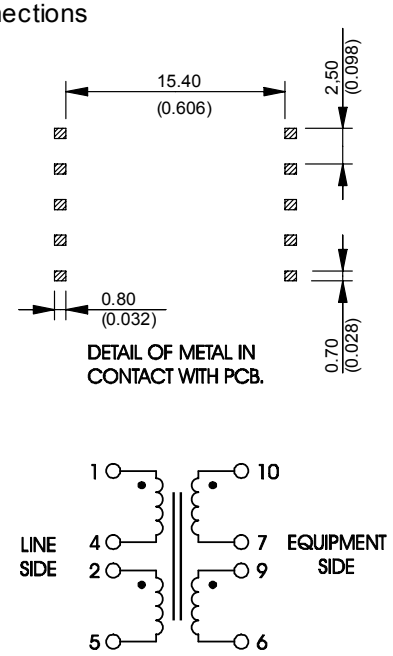
Fig. 1




Terminals finished: SnAg

Connections

Fig. 2




Dimensions shown are in millimetres (inches).

## SAFETY

Constructed in accordance with IEC 60950-1, EN 60950-1 and UL 60950-1, supplementary insulation, 250V maximum working voltage, flammability class V-0.

Installation requirements should be observed whereby a minimum of 1.0mm creepage and 1.5mm clearance is maintained between the ferrite core and accessible conductive parts in the host equipment.

## 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 by BSI to IEC 950:1991/A4:1996 (IEC CB Test Certificate No. GB518W) sub-clauses 1.5, 1.5.1, 1.5.3, 2.2, 2.2.2, 2.2.3, 2.2.4, 2.9.2, 2.9.3, 2.9.4, 4.4, 4.4.3.2 (class V-0) and 5.3 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, clearance greater than 2.0mm, creepage greater than 2.5mm, distance through solid insulation greater than 0.4mm.

Recognized under the Component Recognition Program of Underwriters Laboratories Inc. to US and Canadian requirements CAN/CSA C22.2 No. 60950-1-03/UL60950-1, First Edition, based on IEC 60950-1, First Edition, maximum working voltage 250Vrms, Pollution Degree 2, supplementary insulation.

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.

## COPYRIGHT



E203175

ISO 9001
FM 25326

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