

## PRODUCT DATA SHEET

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# ADSL Transformer

# P3934

### Features

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

### Applications

- \* Analog Devices AD20msp930
- \* ADSL over POTS

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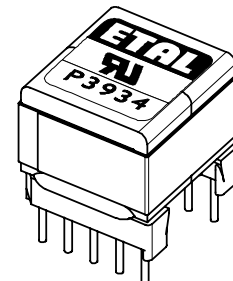
### DESCRIPTION

P3934 is a low distortion transformer for Central Office ADSL over POTS applications using the Analog Devices AD20msp930 chipset.

P3934 is certified to safety standards IEC 950 and UL 60950 for supplementary insulation, 250V working voltage. P3934 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 P3934 exhibits excellent frequency response and balance; in combination with its good harmonic distortion performance, P3934 is ideally suited to low cost yet demanding ADSL applications.



## SPECIFICATIONS

### Electrical

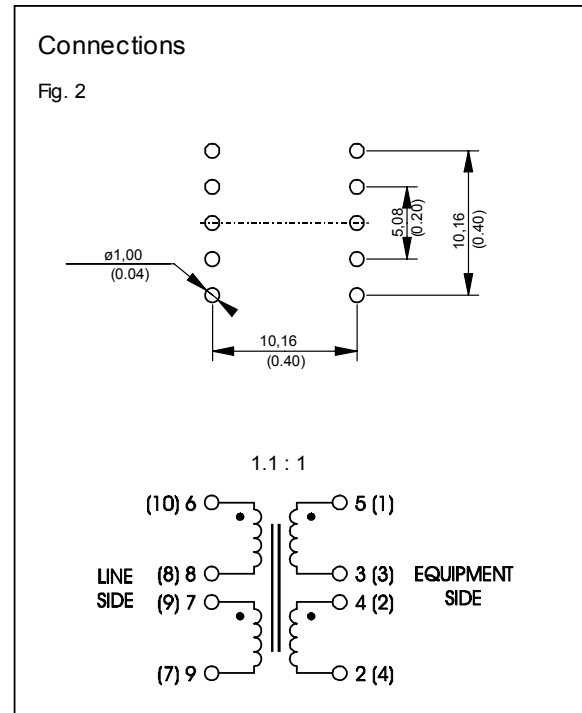
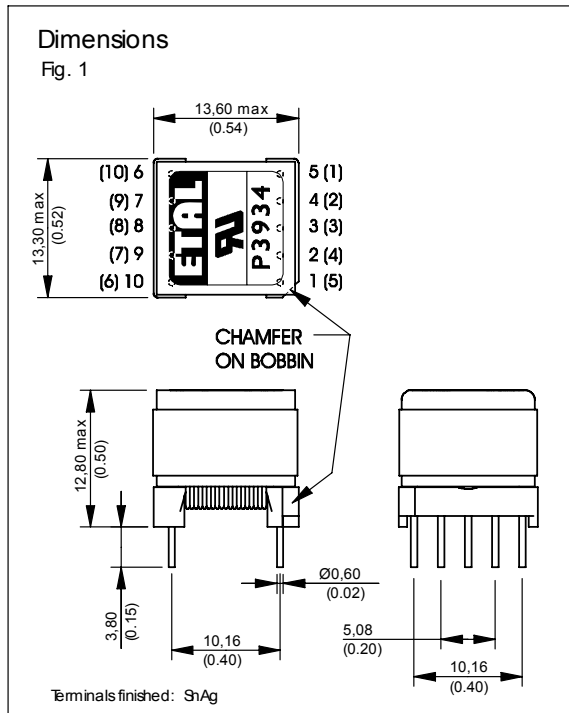
Typical values at T = 25°C, unless otherwise stated.

Parameter	Conditions	Min	Typ	Max	Units
Inductance	10kHz 100mV 6-9 (link 7-8)	1.8	2.0	2.2	mH
Leakage inductance	100kHz, 100mV, 6-9 (link 7-8; link 2, 3, 4, 5)	-	-	12	μH
Interwinding capacitance	100kHz 100mV 5-6 (link 2, 3, 4, 5; link 6, 7, 8, 9)	-	-	40	pF
DC resistance	2-4; 3-5 6-8; 7-9	-	0.5	-	Ω
		-	1.0	-	Ω
Turns ratio	6-9 : 5-2 (link 7-8; link 3-4)	1.09	1.11	1.14	-
Voltage isolation <sup>(1)</sup>	50Hz DC (2, 3, 4, 5 : 6, 7, 8, 9)	2.12	-	-	kVrms
		3.0	-	-	kV
Operating range: Functional Storage	Ambient temperature	-40	-	+85	°C
		-40	-	+85	°C

### Notes

1. Components are 100% tested at 3.25kV DC.

**CONSTRUCTION**



Dimensions shown are in millimetres (inches).  
Terminal references in parentheses denote alternative customer designation.

**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	-40°C to +85°C
Terminal temperature (10s)	260°C

## 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 +85°C 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.

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