

# Microprofile Line Matching Transformer P2281

## Features

- Microprofile 7mm seated height
- Vacuum encapsulated
- Compliant with IEC 60950-1
- Tested to 6.5kV DC isolation

## Application

- Telecommunications
- V.22 bis modems
- Portable computers
- Instrumentation

## Description

P2281 is a microprofile transformer for applications where high performance and safety isolation to the most exacting international standards are required in an extremely small case size. Featuring a 7mm seated height, and less than 15mm square, the P2281 is fully encapsulated and tested to 6500V DC. Despite the subminiature case size, the performance is equal to that of much larger components. P2281 is ideal for voice communications and data at V.22 bis (2400 bps), whilst capable of being matched to both 600Ω and complex impedance telephone

lines. At moderate transmit power levels (e.g. -10dBm) performance to V.32 bis may be achieved. In instrumentation applications P2281 offers a wideband frequency response from 50Hz to 40kHz. P2281 is compliant with IEC 60950-1. Equipment incorporating P2281 is capable of approval worldwide. P2281 is supported by specific recommended matching circuit components to meet the requirements of most national telephone system operators. In particular, the return loss characteristics of P2281 are excellent.

## Specifications

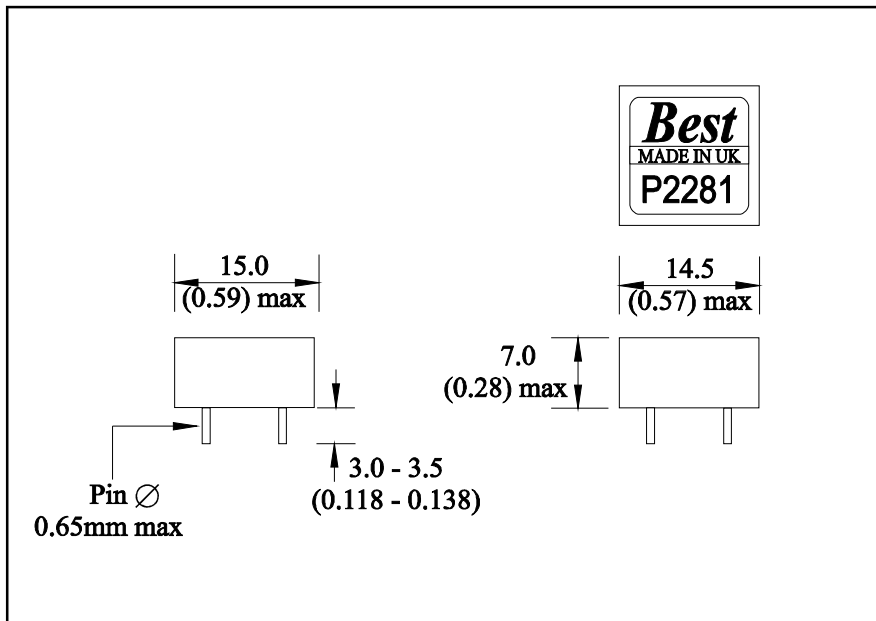
Parameter	Conditions	Min	Typical	Max	Units
Insertion loss	f=2kHz R <sub>L</sub> =600Ω			2.0	dB
	f=2kHz R <sub>L</sub> =430Ω			4.0	dB
Frequency Response	-3dB LF cutoff		50		Hz
	-3dB HF cutoff		40		kHz
Return Loss	200Hz - 4kHz	18		± 0.2	dB
Distortion	f=450Hz 0dBm in line, 3rd harmonic		-60	-54	dBm
Balance	DC - 5kHz Method TG25	80			dB
Saturation	Excitation 50Hz, 250V rms Output Voltage across line			10	V rms
				65	V peak
Voltage Isolation	50Hz	3.88			kV rms
	DC	5.5			kV
Operating range	Ambient temperature				
		Functional	-10		+70
Storage		-40		+125	°C
Humidity				95	%R.H.

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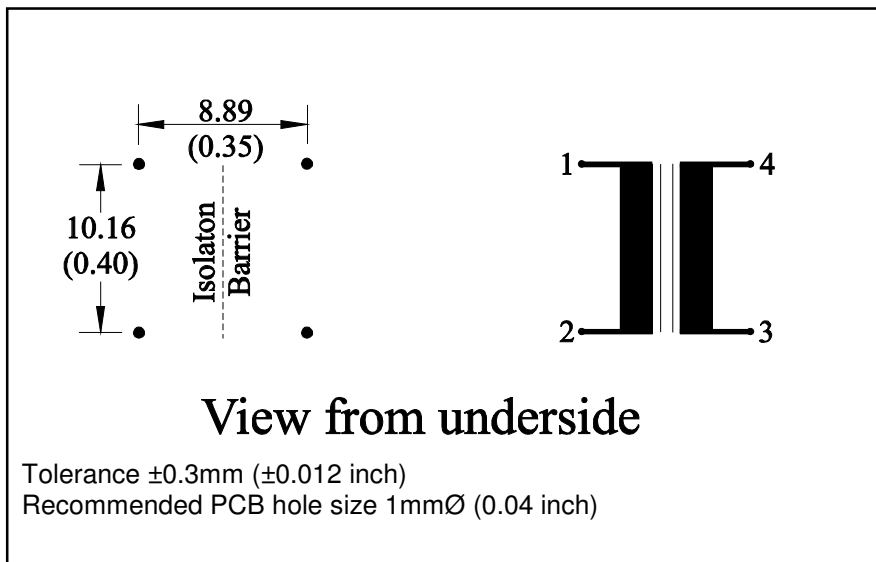
[www.bestwindings.co.uk](http://www.bestwindings.co.uk)

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## Dimensions



## Connections



## Information

### Construction

Dimensions are shown in millimetres (inches).  
 Geometric centres of outline and pin grid coincide within a tolerance circle of  $0.6\text{mm}\varnothing$ .  
 Windings may be used interchangeably as primary or secondary.  
 N.B Isolation barrier cuts  $8.89\text{mm}$  dimension

### Safety

Constructed in accordance with IEC 60950-1, EN60950-1, supplementary insulation, and UL 60950-1, reinforced insulation,  $250\text{Vrms}$  maximum working voltage, flammability class V-0. Distances through solid insulation  $0.4\text{mm}$  minimum.

### Absolute Maximum Ratings

(Ratings of components independent of circuit)

Short term isolation voltage (1s)  
 $4.6\text{kV rms}$ ,  $6.5\text{kV DC}$

DC current -  $100\mu\text{A}$

Storage temperature -  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$

Lead Temperature, 10s -  $260^{\circ}\text{C}$

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