

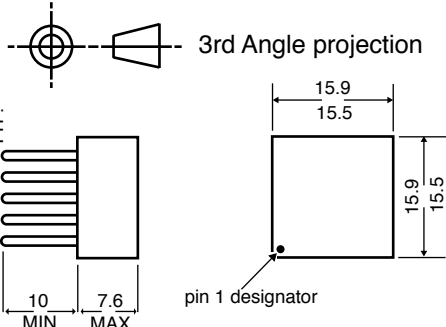
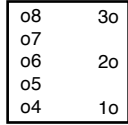
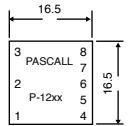
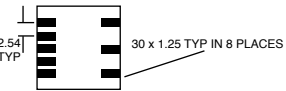
<p>Specification available from: AS SHOWN IN PD 9002 AND PASCALL ELECTRONIC SYSTEMS LTD.</p>	<p>BS 9733 F0001 ISSUE 4 DECEMBER 2001 page 1 of 4 pages</p>
<p>ELECTRONIC COMPONENTS OF ASSESSED QUALITY DETAIL SPECIFICATION IN ACCORDANCE WITH BS 9720: 1983 BS 9733:1978</p>	<p>MANUFACTURERS TYPE NUMBER P1200 SERIES SEE PD 9002</p>
<p>Outline & Dimensions (mm) </p> 	<p>for ordering information see clause 4</p> <p>PASCALL ELECTRONICS LIMITED RYDE, ISLE OF WIGHT UK PO33 1QT</p> <p>CAPABILITY APPROVAL CERTIFICATE No CA/087</p>
  <p>DIMENSIONS IN mm TOLERANCES ± 0.3 UNLESS OTHERWISE STATED</p>	<p>PULSE TRANSFORMER COUPLING / ISOLATION TRANSFORMER</p> <p>FOR USE IN DEF.-STAN 00 -18 AND MIL - STD - 1553 B APPLICATIONS (see clause 6)</p> <p>GLASS FILLED MOULDED HOUSING, EPOXY RESIN ENCAPSULATED</p>
<p>Note: number of pins may vary see table 1 Marking information see clause 2</p>	<p>BASIC & ADDITIONAL ASSESSMENT SUB GROUPS A0, A1, B2</p>

TABLE 1

Pin configurations (see note 1)

Code Letter	Total No. of pins	Pins Omitted / Not Connected
A / SM	8	None Omitted
B / SM	4	2,4,6,8
C / SM	6	5,7
D	4	None Omitted
E	4	None Omitted

A-C = Leaded, SM = Surface Mount

Note 1:

The transformer pin and winding configuration is specified by a suffix comprising the code letter from table 1 together with three code numbers from columns 1, 3 and 5 of table 2 appropriate to the winding configuration.

e.g. BS 9733 F0001-A331

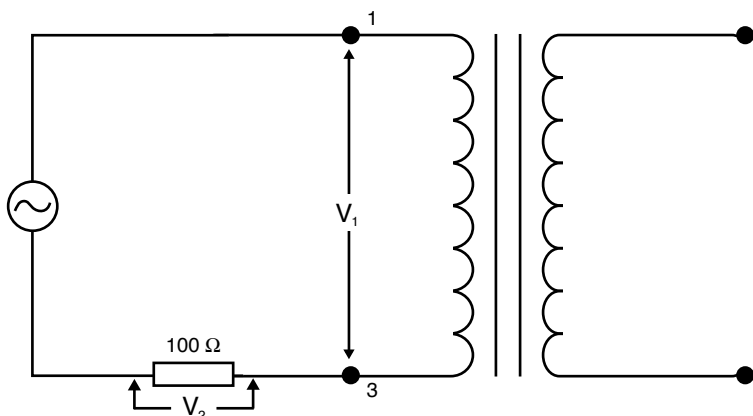
TABLE 2

Winding configurations (see note 1 & figure 1)

Code Number	Ratio between pins 1,3:4,8	Code Number	Ratio between pins 1,3:5,7	Code Number	Centre taps at pins 2,6
0	N.C.	0	N.C.	0	N.C.
1	1:1	1	1.41:1	1	Yes
2	1:2:1	2	1.66:1		
3	1.41:1	3	2:1		
4	0.425:1	4	0.87:1		
5	0.40:1	5	0.41:1		
6	0.56:1	6	0.6:1		
7	0.47:1				
8	1.79:1				

Appendix A - Test Circuits

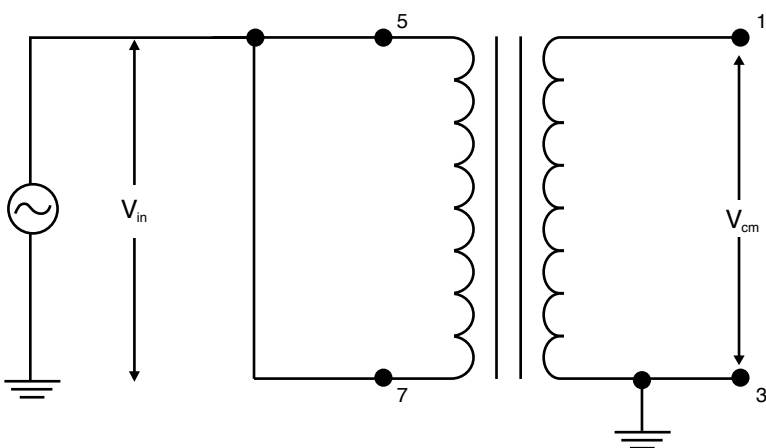
A1. Open circuit primary impedance



$$Z_p = \frac{V_1}{V_2} \times 100 \Omega$$

$f = 75 \text{ kHz}, V = 8 V_2 \text{ peak-to-peak}$

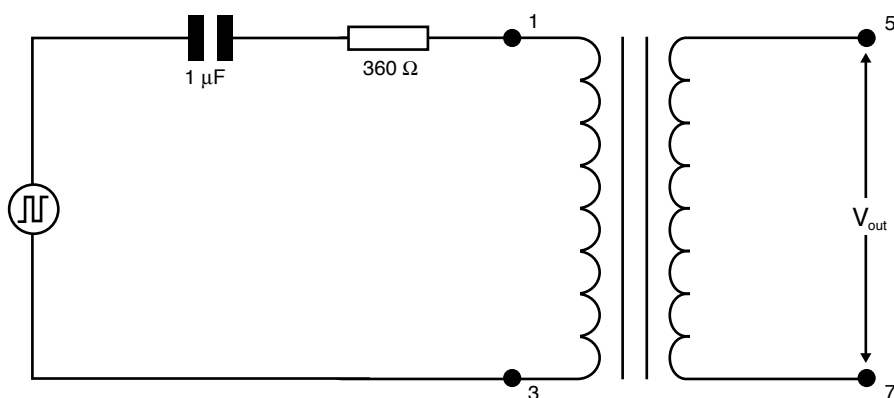
A2. Common mode rejection ratio. (CMR)



$$\text{CMR} = 20 \log_{10} \frac{V_{in}}{V_{cm}}$$

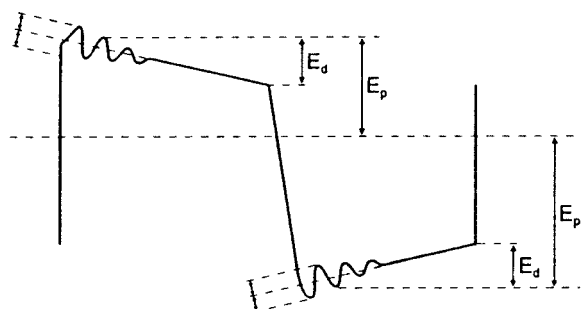
$f = 1 \text{ MHz}$
 $V_{in} = 4 \text{ V peak-to-peak}$

A3. Droop, overshoot and ringing



$f = 250 \text{ kHz}$
 $V_{in} = 27 \text{ V peak-to-peak}$

Overshoot and ringing
 $\pm 1 \text{ V max. peak.}$



$$\text{droop} = \frac{E_d}{E_p} \times 100 \%$$

1. Ratings and characteristics

Electrical characteristics - over operating conditions unless otherwise stated

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Open circuit primary impedance	f = 75 kHz, T _{amb} = 25 °C		8		k Ω
		3			
Droop			10	15	%
Common mode rejection ratio		45	50		dB
Overshoot and ringing			±0.5	±1.0	V
Interwinding resistance	Test voltage = 500 V	50			M Ω
Turns ratio tolerance				±3	%
Peak working voltage				50	V
Frequency range (f)		75		1000	kHz
Operating Temperature (T _{amb})		-55		+125	°C

CLIMATIC CATEGORY:

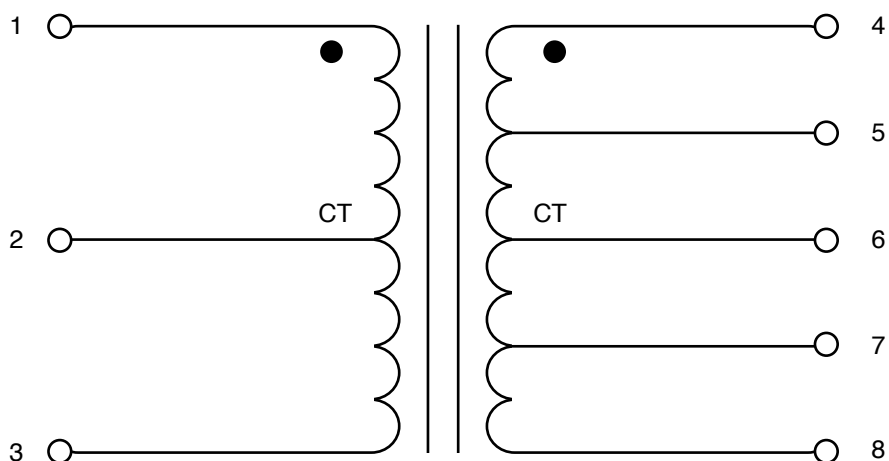
55 / 120 / 56

ENVIRONMENTAL CATEGORY:

Bump; 4000 bumps total at 390 m/s² 3 planes

Vibration; 10-2000 Hz at 98 m/s² 3 planes

Figure 1: Electrical schematic



2. Marking information

Each transformer will bear the following markings:

- a] Specification number and suffix e.g. BS 9733 F0001 -A331 (Leaded), BS 9734 / PEI P1292 (SM)
- b] Manufacturers factory code
- c] Date code
- d] Pin 1 designator - see page 1

3. Related documents

BS 6001	Sampling procedures and tables for inspection by attributes
BS 9000	General requirements for electronic components of assessed quality
BS 9720:1983	Custom built transformers and inductors of assessed quality: Generic data and methods of test
BS 9733:1978	Sectional specification for pulse transformers of assessed quality: BASIC assessment level
PD 9002	BS 9000 Component selection guide

4. Ordering information

Orders for components to this specification shall include the following minimum information:

- a) Quantity
- b) Manufacturers type number
- c) BS specification number and suffix - see page 1, note 1

5. Delayed delivery

Components held for a period exceeding one year after acceptance testing shall be reexamined prior to dispatch and shall satisfy the group A inspection requirements of clause 7

6. Additional information

Storage Temperature: Manufacturer's recommended temperature -55 °C to +150 °C

Application: These transformers are designed for use with the Def Stan 00-18 (Part 2) / 1 and MIL-STD 1553B, Avionic Data Transmission Systems. The inspection required by this detail specification does not invoke either of these standards

7. Inspection requirements

Unless otherwise stated tests shall be made at 25 °C. Samples submitted to tests marked (D) shall not be accepted for release under BS 9000.

INSPECTION	BS 9720 Reference Number and Conditions of Test	REQUIREMENT			
		SYMBOL	LIMITS		UNIT
			MIN	MAX	
GROUP A					
Subgroup A0	100 % Inspection				
Visual inspection	1.2.2.				
Continuity	1.2.4.1.2.				
Impedance	See Appendix A1	Zp	6000		Ω
Phase Test	1.2.4.26. Procedure 1				
Subgroup A1	Inspection level S4, AQL 1 %				
Voltage proof	1.2.4.4. 140 V for 10s		As in 1.2.4.4.		
Insulation resistance (standard atmosphere)	1.2.4.2.1. 500 V dc		200		M Ω
Common mode rejection ratios	See Appendix A2		45		dB
Pulse Characteristics	1.2.4.20	overshoot		±1	V
	See Appendix A3	droop		15	%
Subgroup A2	Inspection level S3, AQL 1.5 %			□	
Voltage transformation ratio	1.2.4.16 f = 10 kHz at 8 V peak-to-peak Procedure 1			±3	%
GROUP B					
Subgroup B1	Inspection level S4, AQL 1 %				
Dimension	1.2.3.		As Page 1		
Subgroup B2	Inspection level S3, AQL 4 %				
Impedance (low temp)	T = -55 °C Appendix A1		3000		Ω
Impedance (high temp)	T = +125 °C Appendix A1		5000		Ω