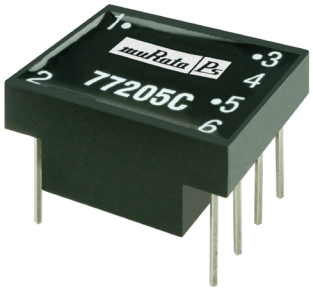
772 Series

Pulse Transformers

Murata Power Solutions



FEATURES

- RoHS compliant
- Inductance to 16.3mH
- Up to 482 Vμs Et rating
- PCB mounting
- UL 94 V-0 package materials
- Up to 4000Vrms isolation
- Backward compatible with Sn/Pb soldering systems

DESCRIPTION

The 772 series of pulse transformers are intended for medium power applications in switch mode power supplies and thyristor/triac firing (e.g. motor control applications). The standard turns ratios may be modified on any transformer with three windings by connecting any two windings in series.

SELECTION GUIDE

Parameter	Order Code											Units
	77201C	77202C	77203C	77203HVC	77204C	77205C	77205SC	77206C	77207C	77208C	77209C	
Turns ratio	1:1	1:1:1	2:1:1	2:1:1	1:1	1:1:1	1:1:1	2:1:1	1:1	1:1:1	2:1:1	
Primary Inductance (Min.)	1.0	1.0	1.0	1.0	4.0	4.0	4.0	4.0	16.3	16.3	16.3	mH
Primary Et Constant (Min.)	120	120	120	120	240	240	240	240	482	482	482	Vμs
Leakage Inductance (Max.)	2.0	3.0	3.5	3.5	5.0	11	11	11	18	40	40	μH
Interwinding Capacitance (Max.)	50	40	30	30	55	35	18	35	65	40	40	pF
DC Resistance (Max.) Primary winding	0.25	0.25	0.24	0.24	0.86	0.90	0.90	0.84	3.50	3.60	3.50	Ω
DC Resistance (Max.) Secondary1 winding	0.23	0.22	0.12	0.12	0.83	0.76	0.76	0.38	3.40	3.10	1.60	
DC Resistance (Max.) Secondary2 winding	-	0.28	0.15	0.15	-	1.10	1.10	0.50	-	4.20	2.00	
Isolation voltage (flash tested for 1 second)	2.5			4.0	2.5							kVrms

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	0°C to 70°C
Storage temperature range	-60°C to 125°C
Lead Temperature 1.5mm from case for 10 seconds	300°C

SOLDERING INFORMATION[1]

Peak wave solder temperature	300°C for 10 seconds
Pin finish	Matte tin with nickel pre-plate

Specifications typical at $T_A = 25°C$

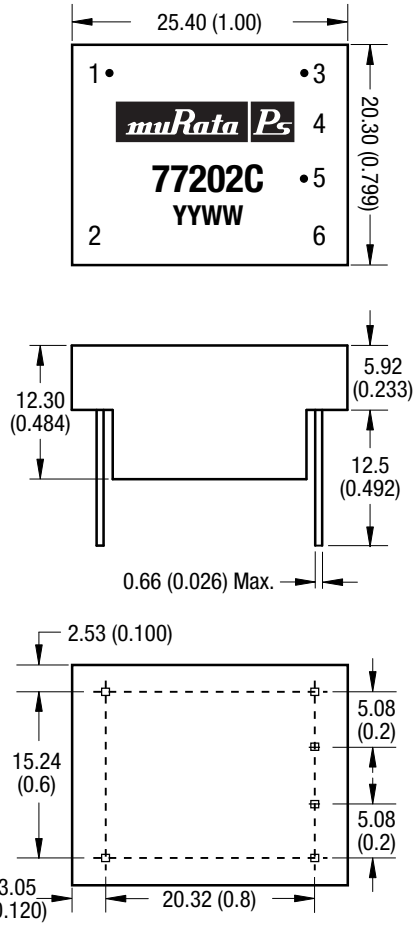
1 For further information, please visit www.murata-ps.com/rohs

RoHS COMPLIANT 2002/95/EC

For full details go to www.murata-ps.com/rohs

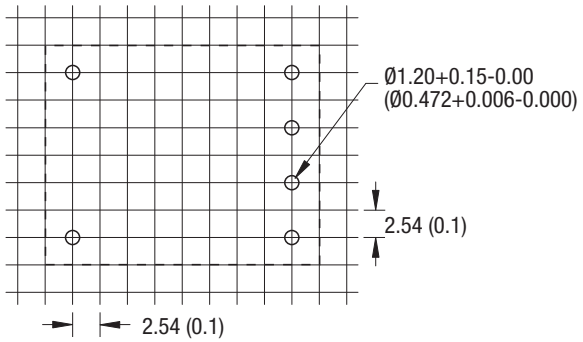
PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS



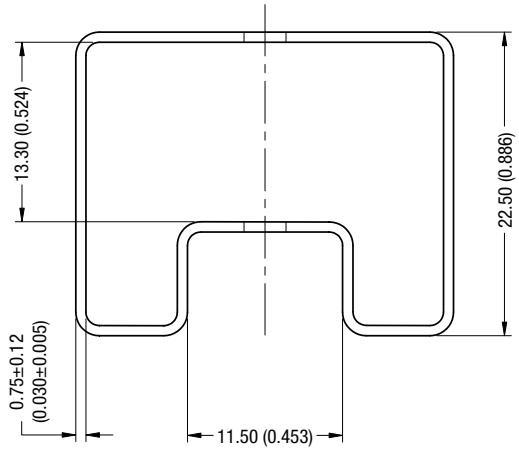
All dimensions in mm (inches) XX.X±0.50(0.02), XX.XX±0.25(0.01).
All pins on a 2.54 (0.1) pitch.

RECOMMENDED FOOTPRINT DETAILS



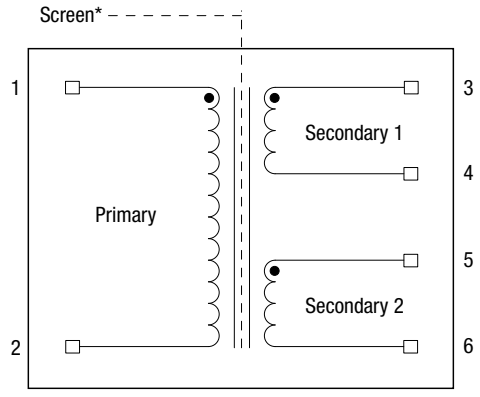
Unless otherwise stated all dimensions in mm (inches) ± 0.25 (0.01).

TUBE DIMENSIONS



Tube length: 530 (20.87) Max.
Unless otherwise stated all dimensions in mm (inches) ± 0.25 (0.01).

PIN CONNECTION STYLE - 8 PIN DIP (TOP VIEW)



* Only on 77205SC

TECHNICAL NOTES

ISOLATION VOLTAGE

'Hi Pot Test', 'Flash Tested', 'Withstand Voltage', 'Proof Voltage', 'Dielectric Withstand Voltage' & 'Isolation Test Voltage' are all terms that relate to the same thing, a test voltage, applied for a specified time, across a component designed to provide electrical isolation, to verify the integrity of that isolation.

All products in this series are 100% production tested at their stated isolation voltage.

A question commonly asked is, "What is the continuous voltage that can be applied across the part in normal operation?"

For a part holding no specific agency approvals both input and output should normally be maintained within SELV limits i.e. less than 42.4V peak, or 60VDC. The isolation test voltage represents a measure of immunity to transient voltages and the part should never be used as an element of a safety isolation system. The part could be expected to function correctly with several hundred volts offset applied continuously across the isolation barrier; but then the circuitry on both sides of the barrier must be regarded as operating at an unsafe voltage and further isolation/insulation systems must form a barrier between these circuits and any user-accessible circuitry according to safety standard requirements.

REPEATED HIGH-VOLTAGE ISOLATION TESTING

It is well known that repeated high-voltage isolation testing of a barrier component can actually degrade isolation capability, to a lesser or greater degree depending on materials, construction and environment. This series has toroidal isolation transformers, with no additional insulation between primary and secondary windings of enameled wire. While parts can be expected to withstand several times the stated test voltage, the isolation capability does depend on the wire insulation. Any material, including this enamel (typically polyurethane) is susceptible to eventual chemical degradation when subject to very high applied voltages thus implying that the number of tests should be strictly limited. We therefore strongly advise against repeated high voltage isolation testing, but if it is absolutely required, that the voltage be reduced by 20% from specified test voltage.

This consideration equally applies to agency recognized parts rated for better than functional isolation where the wire enamel insulation is always supplemented by a further insulation system of physical spacing or barriers.

Murata Power Solutions

Murata Power Solutions, Inc.
11 Cabot Boulevard, Mansfield, MA 02048-1151 U.S.A.
Tel: (508) 339-3000 (800) 233-2765 Fax: (508) 339-6356
www.murata-ps.com email: sales@murata-ps.com ISO 9001 REGISTERED

USA: Mansfield (MA), Tel: (800) 233 2765, email: sales@murata-ps.com
Canada: Toronto, Tel: (866) 740 1232, email: toronto@murata-ps.com
UK: Milton Keynes, Tel: +44 (0)1908 615232, email: mk@murata-ps.com
France: Montigny Le Bretonneux, Tel: +33 (0)1 34 60 01 01, email: france@murata-ps.com
Germany: München, Tel: +49 (0)89-544334-0, email: ped.munich@murata-ps.com
Japan: Tokyo, Tel: 3-3779-1031, email: sales_tokyo@murata-ps.com
Osaka, Tel: 6-6354-2025, email: sales_osaka@murata-ps.com
Website: www.murata-ps.jp
China: Shanghai, Tel: +86 215 027 3678, email: shanghai@murata-ps.com
Guangzhou, Tel: +86 208 221 8066, email: guangzhou@murata-ps.com