

FEATURES

- RoHS compliant
- Inductance to 16.3mH
- Up to 482 V μ s 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.



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

772 Series

Pulse Transformers

SELECTION GUIDE

Parameter	Order Code						Units
	77202C	77203HVC	77204C	77205C	77208C	77209C	
	Recommended In Production						
Turns ratio	1:1:1	2:1:1	1:1	1:1:1	1:1:1	2:1:1	
Primary Inductance (Min.)	1.0	1.0	4.0	4.0	16.3	16.3	mH
Primary Et Constant (Min.)	120	120	240	240	482	482	V μ s
Leakage Inductance (Max.)	3.0	3.5	5.0	11	40	40	μ H
Interwinding Capacitance (Max.)	40	30	55	35	40	40	pF
DC Resistance (Max.) Primary winding	0.25	0.24	0.86	0.90	3.60	3.50	Ω
DC Resistance (Max.) Secondary1 winding	0.22	0.12	0.83	0.76	3.10	1.60	
DC Resistance (Max.) Secondary2 winding	0.28	0.15	-	1.10	4.20	2.00	
Isolation voltage (flash tested for 1 second)	2.5	4.0	2.5				kVrms

SELECTION GUIDE

Parameter	Order Code					Units
	77201C	77203C	77205SC	77206C	77207C	
	Discontinued					
Turns ratio	1:1	2:1:1	1:1:1	2:1:1	1:1	
Primary Inductance (Min.)	1.0	1.0	4.0	4.0	16.3	mH
Primary Et Constant (Min.)	120	120	240	240	482	V μ s
Leakage Inductance (Max.)	2.0	3.5	11	11	18	μ H
Interwinding Capacitance (Max.)	50	30	18	35	65	pF
DC Resistance (Max.) Primary winding	0.25	0.24	0.90	0.84	3.50	Ω
DC Resistance (Max.) Secondary1 winding	0.23	0.12	0.76	0.38	3.40	
DC Resistance (Max.) Secondary2 winding	-	0.15	1.10	0.50	-	
Isolation voltage (flash tested for 1 second)	2.5					kVrms

Specifications typical at T_A = 25°C

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 INFORMATION¹

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

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

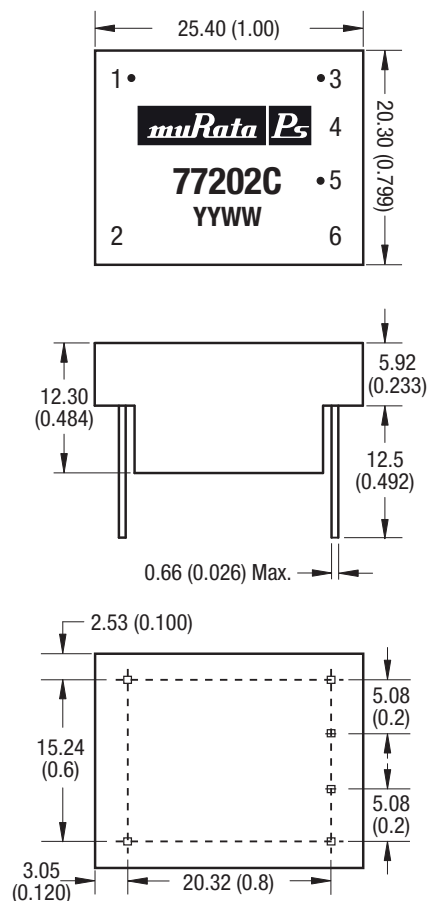
It is well known that repeated high-voltage isolation testing of a barrier component can actually degrade isolation capability, to a lesser or greater degree depending on materials, construction and environment. This series has toroidal isolation transformers, with no additional insulation between primary and secondary windings of enamelled 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 recognised 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.

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

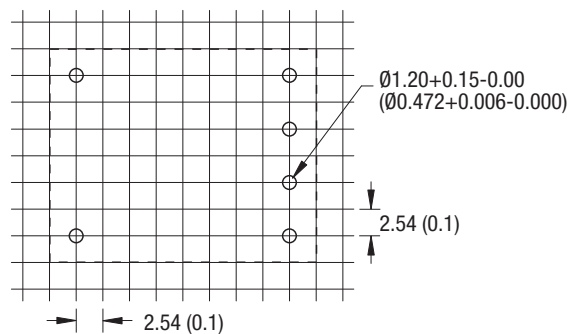
PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS



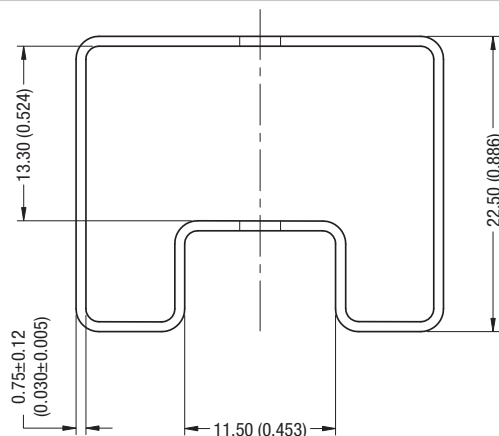
All dimensions in mm (inches) XX.X±0.50(0.02), XX.XX±0.25(0.01).
All pins on a 2.54 (0.1) pitch.

RECOMMENDED FOOTPRINT DETAILS



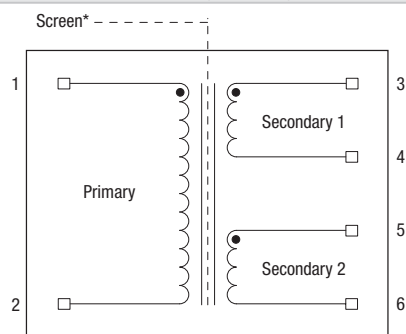
Unless otherwise stated all dimensions in mm (inches) ± 0.25 (0.01).

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

DISCLAIMER

Unless otherwise stated in the datasheet, all products are designed for standard commercial and industrial applications and NOT for safety-critical and/or life-critical applications.

Particularly for safety-critical and/or life-critical applications, i.e. applications that may directly endanger or cause the loss of life, inflict bodily harm and/or loss or severe damage to equipment/property, and severely harm the environment, a prior explicit written approval from Murata is strictly required. Any use of Murata standard products for any safety-critical, life-critical or any related applications without any prior explicit written approval from Murata shall be deemed unauthorised use.

These applications include but are not limited to:

- Aircraft equipment
- Aerospace equipment
- Undersea equipment
- Power plant control equipment
- Medical equipment
- Transportation equipment (automobiles, trains, ships, etc.)
- Traffic signal equipment
- Disaster prevention / crime prevention equipment
- Data Processing equipment

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