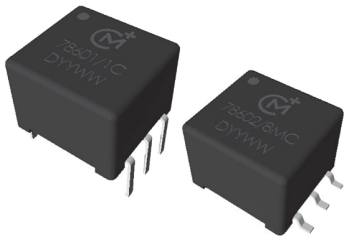
muRata
INNOVATOR IN ELECTRONICS

786 Series

General Purpose Pulse Transformers



FEATURES

- RoHS compliant
- 4 Configurations
- Primary inductance to 10mH
- 1kVrms isolation
- Industry standard pinout
- Low profile
- Toroidal construction
- Fully encapsulated

DESCRIPTION

The 786 series is a comprehensive range of general purpose pulse transformers. Common applications include line coupling, matching or isolating. The devices can also be used in small isolated power supplies and also as common-mode chokes in filtering applications.

SELECTION GUIDE

Order Code	Turns Ratio	Min. Primary Inductance	Primary Min. Volt-time Product, Et	Typ. Leakage Inductance	Typ. Interwinding Capacitance	Max. DC Resistance	Isolation Voltage	Winding Configuration
		µH	Vµs	µH	pF	Ω	Vrms	
Recommended / In Production								
78601/3C	1:1	200	6	0.20	14	0.25	1000	1
78601/2C	1:1	500	10	0.25	22	0.34		
78601/1C	1:1	2000	20	0.47	49	0.60		
78601/9C	1:1	10000	56	0.86	121	1.30		
78602/1C	1:1:1	2000	20	0.60	72	0.66	1000	2
78602/9C	1:1:1	10000	56	0.71	167	1.34		
78604/9C	2:1	10000	56	1.64	72	1.23	1000	1
78613/2C	1CT:1	500	10	1.07	20	0.36	1000	3
78615/8C	1CT:1CT	1000	15	11.9	10	0.45	1000	4
78615/9C	1CT:1CT	10000	56	44.5	19	1.33		
To be discontinued								
78601/4C	1:1	67	4	0.19	8	0.17	1000	1
78601/8C	1:1	1000	15	0.29	35	0.45		
78601/16C	1:1	4000	28	0.47	78	0.84		
78602/4C	1:1:1	67	4	0.11	12	0.18	1000	2
78602/3C	1:1:1	200	6	0.17	19	0.24		
78602/2C	1:1:1	500	10	0.27	32	0.34		
78602/8C	1:1:1	1000	15	0.35	47	0.46		
78602/16C	1:1:1	4000	28	0.71	116	0.92		
78604/4C	2:1	67	4	0.41	4	0.18	1000	1
78604/3C	2:1	200	6	0.49	9	0.25		
78604/2C	2:1	500	10	0.65	13	0.34		
78604/8C	2:1	1000	15	0.76	20	0.46		
78604/1C	2:1	2000	20	0.99	29	0.60		
78604/16C	2:1	4000	28	1.61	50	0.85		
78613/4C	1CT:1	67	4	0.30	7	0.20	1000	3
78613/3C	1CT:1	200	6	0.65	12	0.25		
78613/8C	1CT:1	1000	15	1.13	35	0.48		
78613/1C	1CT:1	2000	20	1.53	47	0.63		
78613/16C	1CT:1	4000	28	1.98	64	0.88		
78613/9C	1CT:1	10000	56	3.83	72	1.33		
78615/4C	1CT:1CT	67	4	1.21	3	0.17	1000	4
78615/3C	1CT:1CT	200	6	3.64	5	0.24		
78615/2C	1CT:1CT	500	10	6.86	7	0.34		
78615/1C	1CT:1CT	2000	20	16.0	16	0.60		
78615/16C	1CT:1CT	4000	28	37.7	20	0.87		

RoHS COMPLIANT

25

For full details go to
www.murata.com/en-global/products/power/rohs

All specifications typical at T_A=25°C

786 Series

General Purpose Pulse Transformers

SELECTION GUIDE (Continued)

Order Code[1]	Turns Ratio	Min. Primary Inductance (µH)	Primary Min. Volt-time Product, Et (Vµs)	Typ. Leakage Inductance (µH)	Typ. Interwinding Capacitance (pF)	Max. DC Resistance (Ω)	Isolation Voltage (Vrms)	Winding Configuration	Recommended Alternative
Discontinued									
78601/4MC	1:1	67	4	0.19	8	0.17	1000	1	Contact Murata
78601/3MC	1:1	200	6	0.20	14	0.25			Contact Murata
78601/2MC	1:1	500	10	0.25	22	0.34			78601/2JC
78601/8MC	1:1	1000	15	0.29	35	0.45			Contact Murata
78601/1MC	1:1	2000	20	0.47	49	0.60			78601/1JC
78601/16MC	1:1	4000	28	0.47	78	0.84			Contact Murata
78601/9MC	1:1	10000	56	0.86	121	1.30			78601/9JC
78602/4MC	1:1:1	67	4	0.11	12	0.18	1000	2	Contact Murata
78602/3MC	1:1:1	200	6	0.17	19	0.24			Contact Murata
78602/2MC	1:1:1	500	10	0.27	32	0.34			78602/2JC
78602/8MC	1:1:1	1000	15	0.35	47	0.46			78602/8JC
78602/1MC	1:1:1	2000	20	0.60	72	0.66			78602/1JC
78602/16MC	1:1:1	4000	28	0.71	116	0.92			78602/16JC
78602/9MC	1:1:1	10000	56	0.71	167	1.34			78602/9JC
78604/4MC	2:1	67	4	0.41	4	0.18	1000	1	Contact Murata
78604/3MC	2:1	200	6	0.49	9	0.25			Contact Murata
78604/2MC	2:1	500	10	0.65	13	0.34			Contact Murata
78604/8MC	2:1	1000	15	0.76	20	0.46			78604/8JC
78604/1MC	2:1	2000	20	0.99	29	0.60			Contact Murata
78604/16MC	2:1	4000	28	1.61	50	0.85			Contact Murata
78604/9MC	2:1	10000	56	1.64	72	1.23			78604/9JC
78613/4MC	1CT:1	67	4	0.30	7	0.20	1000	3	Contact Murata
78613/3MC	1CT:1	200	6	0.65	12	0.25			Contact Murata
78613/2MC	1CT:1	500	10	1.07	20	0.36			Contact Murata
78613/8MC	1CT:1	1000	15	1.13	35	0.48			78613/8JC
78613/1MC	1CT:1	2000	20	1.53	47	0.63			Contact Murata
78613/16MC	1CT:1	4000	28	1.98	64	0.88			Contact Murata
78613/9MC	1CT:1	10000	56	3.83	72	1.33			78613/9JC
78615/4MC	1CT:1CT	67	4	1.21	3	0.17	1000	4	Contact Murata
78615/3MC	1CT:1CT	200	6	3.64	5	0.24			Contact Murata
78615/2MC	1CT:1CT	500	10	6.86	7	0.34			Contact Murata
78615/8MC	1CT:1CT	1000	15	11.9	10	0.45			78615/8JC
78615/1MC	1CT:1CT	2000	20	16.0	16	0.60			Contact Murata
78615/16MC	1CT:1CT	4000	28	37.7	20	0.87			Contact Murata
78615/9MC	1CT:1CT	10000	56	44.5	19	1.33			78615/9JC

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	0°C to 70°C
Storage temperature range	-40°C to 125°C

SOLDERING INFORMATION

Pin finish	Matte tin
Peak wave solder temperature	260°C for 10 seconds
Peak reflow temperature	220°C

1. Surface mount compents are either supplied in tubes or tape and reel. For tape and reel packaging, orderable part numbers are 786XX/XMC-R (500 pieces per reel).

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.

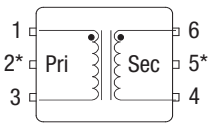
REPEATED HIGH-VOLTAGE ISOLATION TESTING

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.

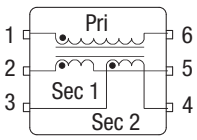
This consideration equally applies to agency recognised parts rated for better than functional isolation where the wire enamel insulation is always supplemented by a further insulation system of physical spacing or barriers.

WINDING CONFIGURATION - 6 PIN DIL/SMD (TOP VIEW)

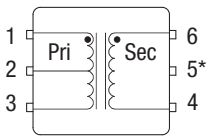
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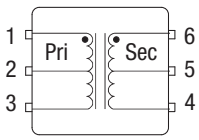
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3



4

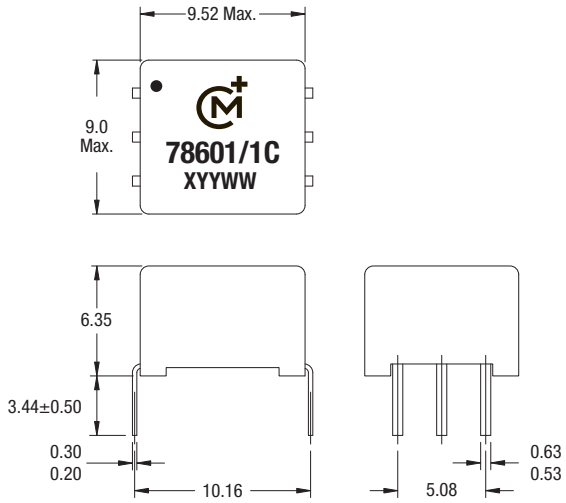


* Pins only fitted on 786XX/XMC and 786XX/XMC-R variants.

PACKAGE SPECIFICATIONS

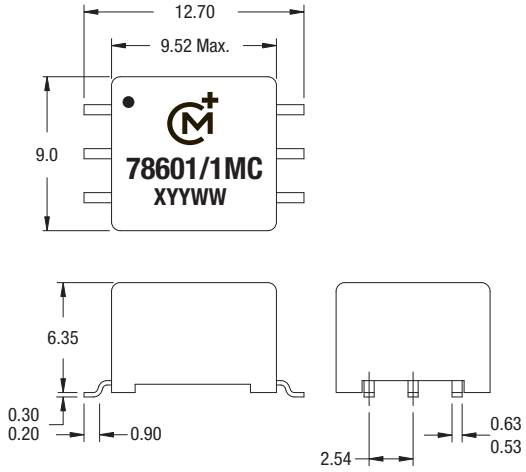
MECHANICAL DIMENSIONS

6 Pin DIL Package Style



Unless otherwise stated all dimensions in mm ±0.25.
All pins on a 2.54 pitch and within ±0.25 of true position.

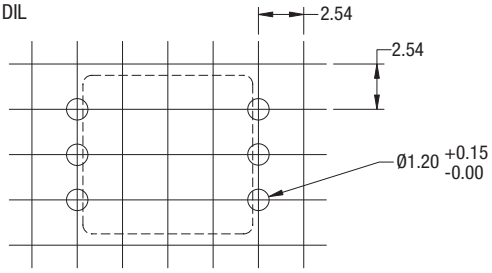
6 Pin SMD Package Style



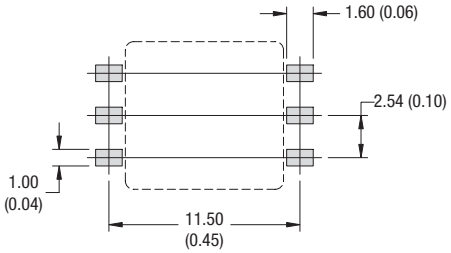
Package Weight: 1.1g Typ.

RECOMMENDED FOOTPRINT DETAILS

6 Pin DIL

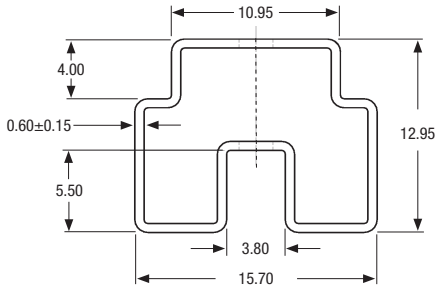


6 Pin SM



Unless otherwise stated all dimensions in mm ±0.25.
All pins on a 2.54 pitch and within ±0.25 of true position.

TUBE OUTLINE DIMENSIONS

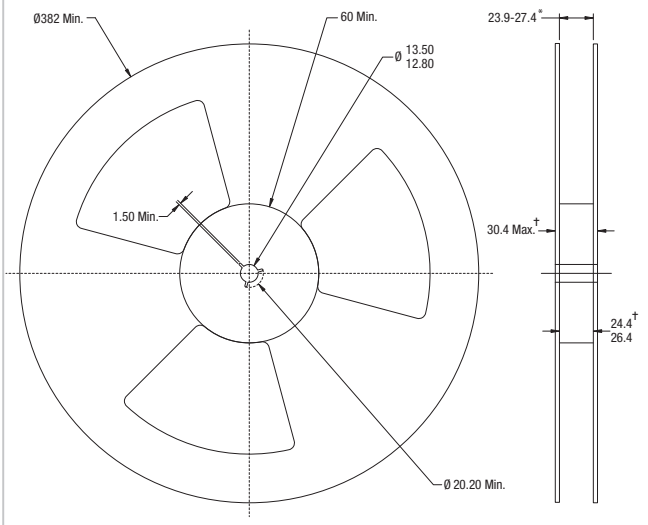


Unless otherwise stated all dimensions in mm ±0.25.
Tube length: 465±2.
Tube material: Antistatic coated clear pvc.

Tube quantity: 50.

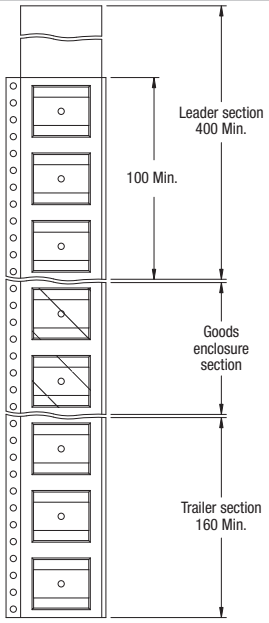
TAPE & REEL SPECIFICATIONS

REEL OUTLINE DIMENSIONS



Unless otherwise stated all dimensions in mm ±0.25.
* Includes flange distortion at outer edge.
† Measured at hub.

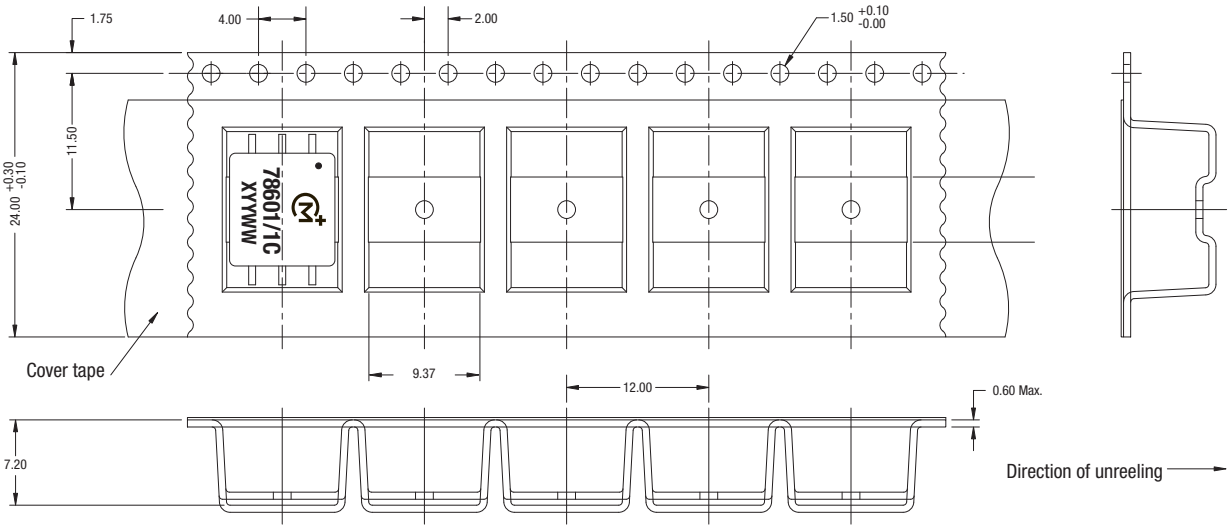
REEL PACKAGING DETAILS



Unless otherwise stated all dimensions in mm ±0.25.

Reel Quantity: 500

TAPE OUTLINE DIMENSIONS



Unless otherwise stated all dimensions in mm ±0.25.

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- Undersea equipment
- Power plant control equipment
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- Data Processing equipment

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