



FEATURES

- RoHS compliant
- UL 94V-0 package material
- Isolation to 4kVrms
- Compact footprint
- PCB mounting
- Backward compatible with Sn/Pb soldering systems

DESCRIPTION

The 1000 series are intended for wideband and pulse operations. They are also suitable for signal isolation and use in small isolated power supplies. The compact footprint makes them ideal for applications where space is at a premium.

SELECTION GUIDE¹

| Order Code | Turns Ratio ±2% | Min. Primary Inductance | Min. Primary Constant, E ₁ | Max. Leakage Inductance | Max. Interwinding Capacitance | Max. DC Resistance Primary Winding | Max. DC Resistance Secondary 1 winding | Max. DC Resistance Secondary 2 winding | Isolation Voltage | Pin Connection Style | Mechanical Dimensions | Recommended Alternative |
|---|-----------------|-------------------------|---------------------------------------|-------------------------|-------------------------------|------------------------------------|--|--|--------------------|----------------------|-----------------------|-------------------------|
| | | mH | Vμs | μH | pF | Ω | Ω | Ω | | | | |
| Recommended In Production | | | | | | | | | | | | |
| 1001C | 1:1 | 3.0 | 200 | 32 | 23 | 1.2 | 1.0 | - | 2000 | A | 2 | |
| 1002C | 1:1:1 | 3.0 | 200 | 30 | 51 | 1.4 | 1.3 | 1.7 | 2000 | B | 1 | |
| 1003C | 2:1:1 | 12 | 400 | 62 | 58 | 5.0 | 2.0 | 3.0 | 2000 | B | 1 | |
| 1013C | 1:1:1 | 3.0 | 200 | 3 | 585 | 2.0 | 2.0 | 2.0 | 500V _{dc} | B | 1 | |
| 1016C | 1:1 | 3.0 | 200 | 22 | 23 | 1.2 | 1.0 | - | 3500 | A | 2 | |
| 1017C | 1:1 | 0.8 | 130 | 5 | 20 | 0.4 | 0.3 | - | 4000 | A | 2 | |
| 1025C | 2:1:1 | 24 | 570 | 90 | 83 | 8.7 | 3.5 | 5.2 | 2000 | B | 1 | |
| NRND | | | | | | | | | | | | |
| 1007C | 1:1:1 | 7.4 | 310 | 35 | 55 | 2.9 | 2.5 | 3.4 | 2000 | B | 1 | Contact Murata |
| 1009C | 1:1:1 | 22 | 550 | 85 | 71 | 13.4 | 11 | 15.8 | 2000 | B | 1 | Contact Murata |
| 1024C | 1.2CT:1CT | 8.8 | 340 | 60 | 25 | 2.5 | 2.5 | - | 2000 | C | 1 | Contact Murata |
| 1026C | 1:1:1 | 6.0 | 285 | 30 | 62 | 4.0 | 4.0 | 4.9 | 2000 | B | 1 | Contact Murata |
| 1082C | 100:1 | 6.1 | 280 | - | 6 | 1.1 | 0.1 | - | 2000 | A | 2 | Contact Murata |

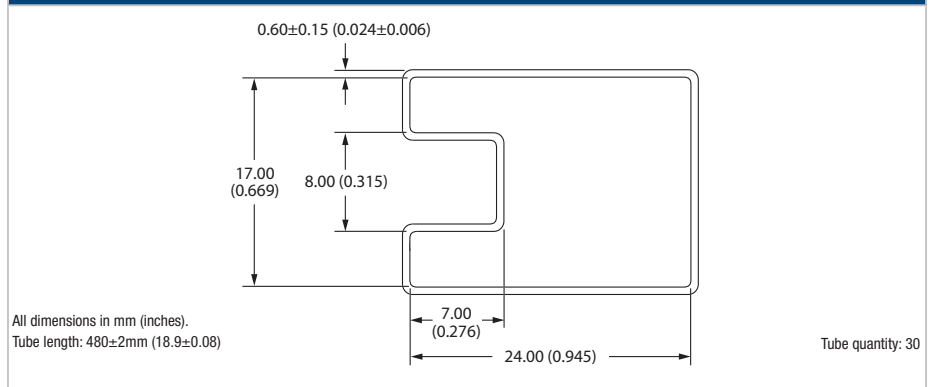
ABSOLUTE MAXIMUM RATINGS

| | |
|--------------------------------------|----------------|
| Operating free air temperature range | 0°C to 70°C |
| Storage temperature range | -60°C to 125°C |

SOLDERING INFORMATION¹

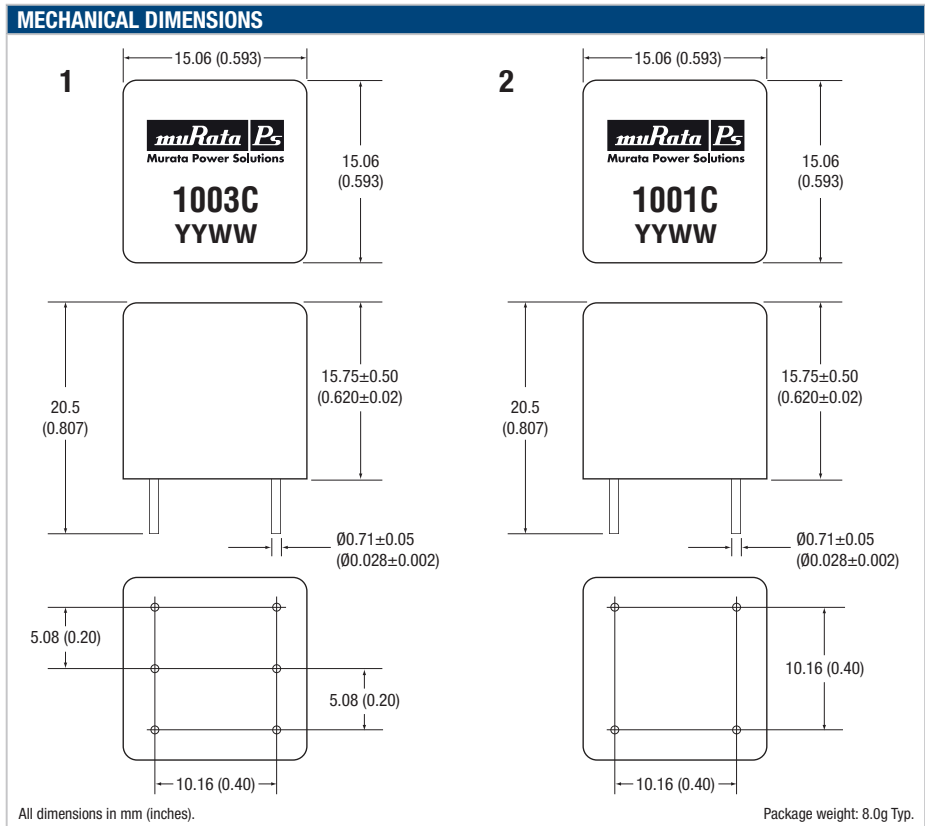
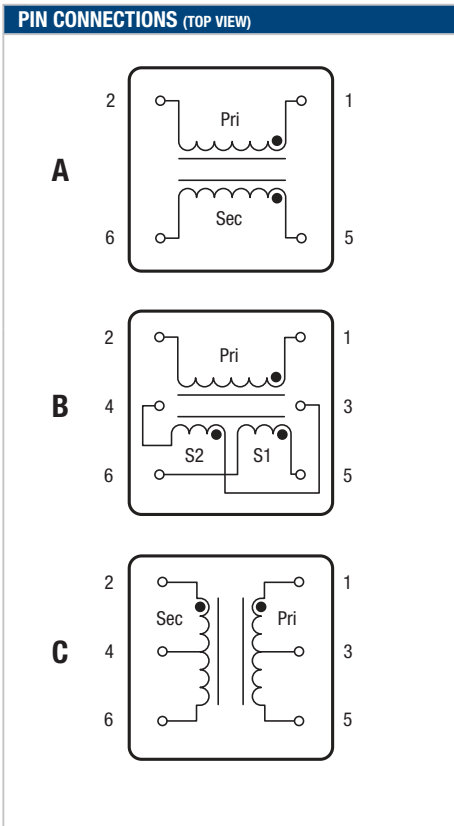
| | |
|------------------------------|---|
| Peak wave solder temperature | 260°C for 10 seconds |
| Wave solder | Wave solder profile not to exceed the profile recommended in IEC 61760-1 Section 6.1.3. |
| Pin finish | Matte tin |

TUBE DIMENSIONS



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

¹ For further information, please visit www.murata-ps.com/rohs
All specifications typical at T_A=25°C.



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. While parts can be expected to withstand several times the stated test voltage, the isolation capability does depend on the insulative materials used. Such materials are susceptible to chemical degradation when subject to very high applied voltages. 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 wire enamel insulation is always supplemented by a further insulation system of physical spacing or barriers.

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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Refer to: <https://www.murata.com/en-eu/products/power/requirements>

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