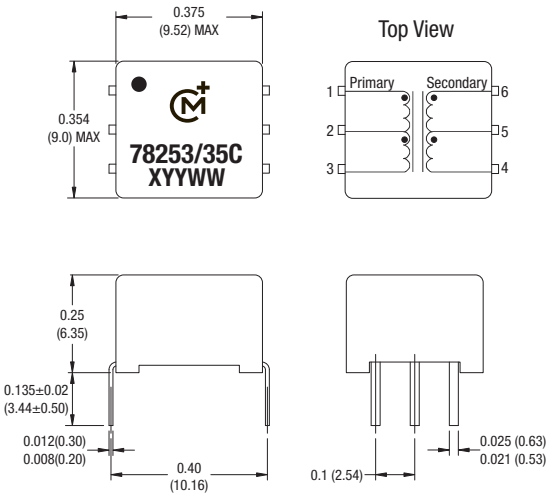
ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	-40°C to 85°C
Storage temperature range	-50°C to 125°C
Lead Temperature 1.5mm from case for 10 seconds	300°C
Peak current I_{PK}	400mA
Isolation voltage 78253/XX(M)C (flash tested for 1 second)	1500VDC
Isolation voltage 78253/XX(M)VC (flash tested for 1 second)	4000VDC

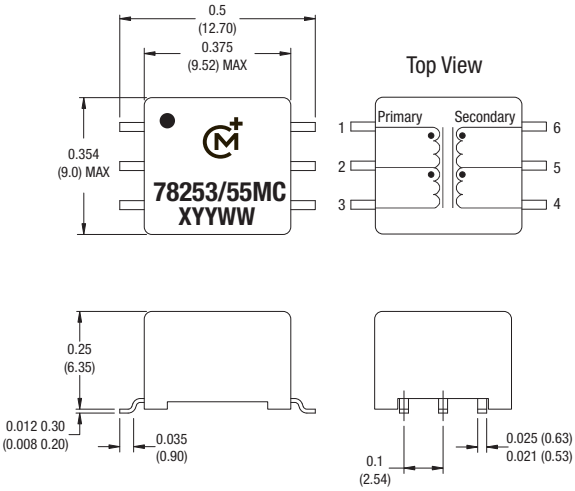
PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS

6 Pin DIL



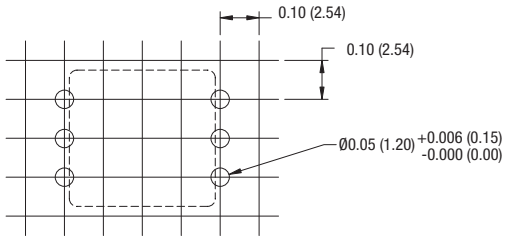
6 Pin SM



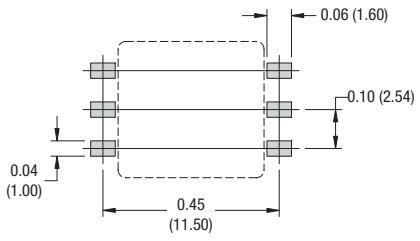
Unless otherwise stated all dimensions in inches (mm) ±0.01 (0.25).
All pins on a 0.1 (2.54) pitch and within ±0.01 (0.25) of true position.
Package weight 1.0g Typ.

RECOMMENDED FOOTPRINT DETAILS

6 Pin DIL



6 Pin SM

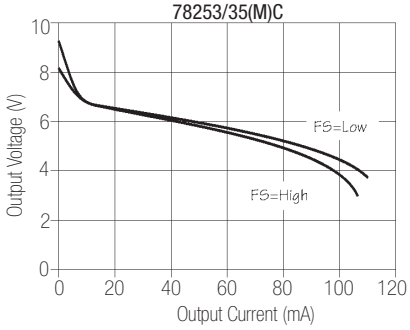


Unless otherwise stated all dimensions in inches (mm) ±0.01 (0.25).
All pins on a 0.1 (2.54) pitch and within ±0.01 (0.25) of true position.

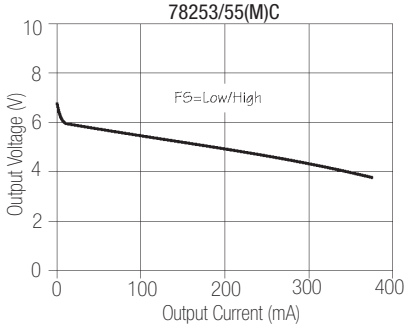
TYPICAL CHARACTERISTICS (VOLTAGE CURVES)

VOLTAGE CURVES

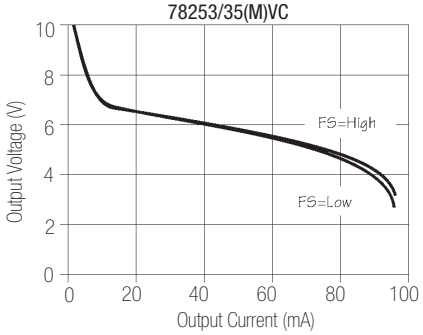
78253/35(M)C



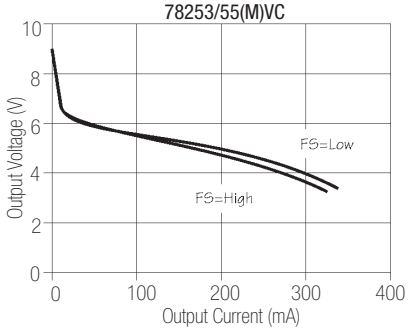
78253/55(M)C



78253/35(M)VC

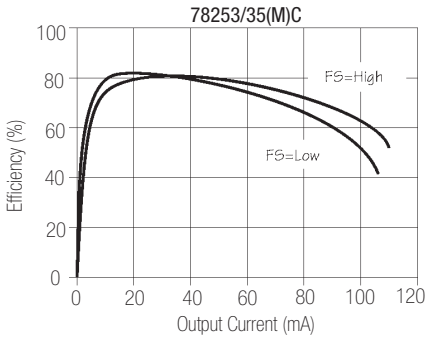


78253/55(M)VC

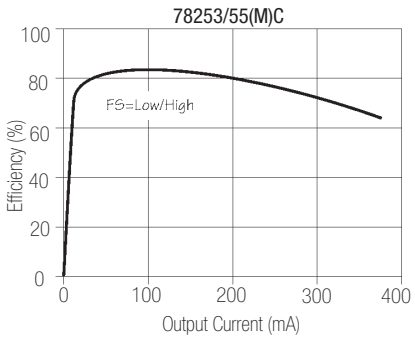


EFFICIENCY CURVES

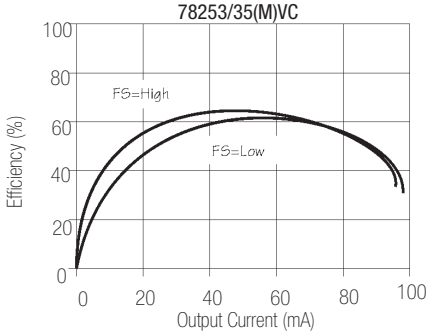
78253/35(M)C



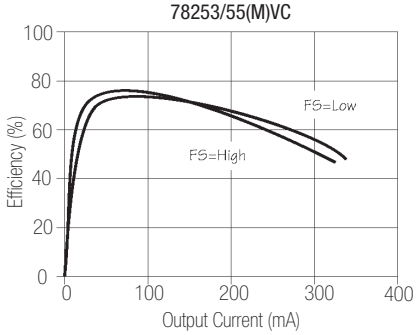
78253/55(M)C



78253/35(M)VC



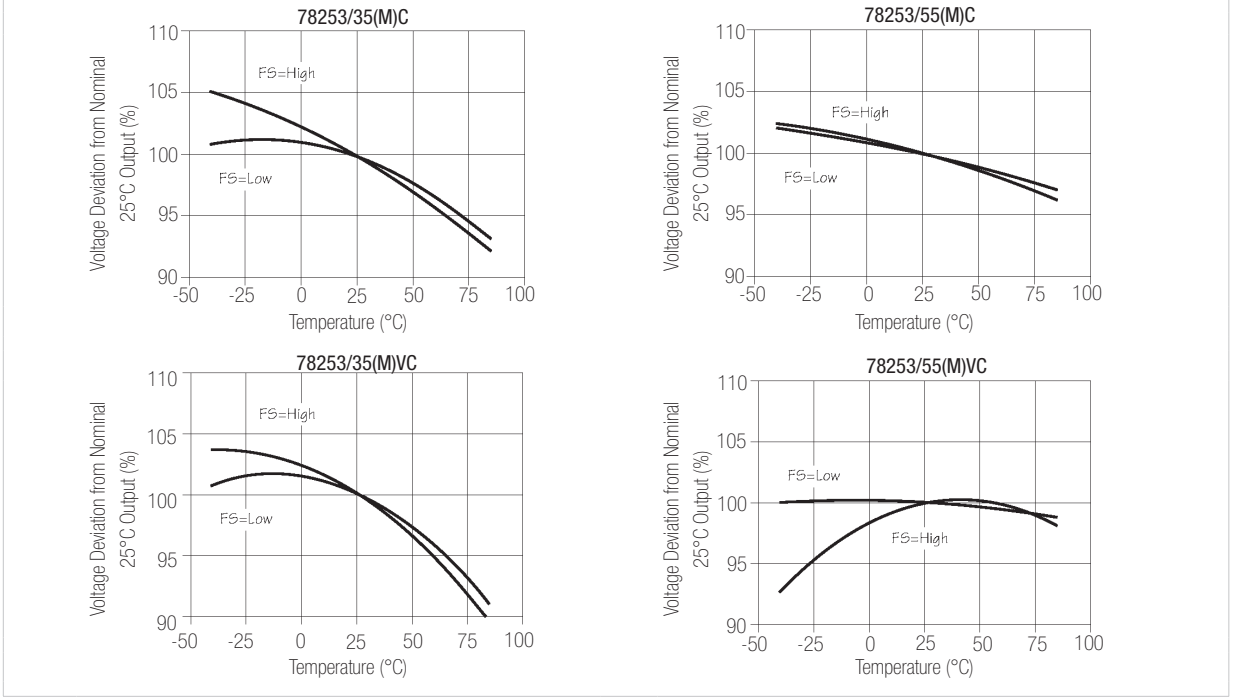
78253/55(M)VC



All curves are derived from testing with the Maxim MAX235 IC using the circuit shown in application note MPAN-03 (download at http://www.murata-ps.com/data/apnotes/mpan-03.pdf).

TYPICAL CHARACTERISTICS (VOLTAGE CURVES) continued

VOLTAGE DEVIATION



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

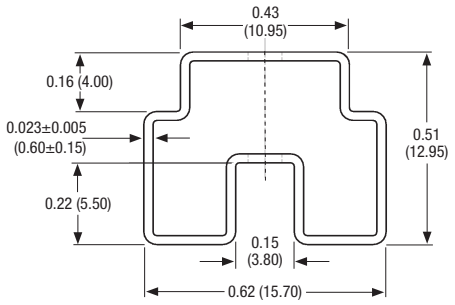
It is well known that repeated high-voltage isolation testing of a barrier component can actually degrade isolation capability, to a lesser or greater degree depending on materials, construction and environment. This series has toroidal isolation transformers, with no additional insulation between primary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

SOLDERING INFORMATION[1]

Pin finish	Matte tin
Peak wave solder temperature	300˚C for 10 seconds
Peak reflow temperature	220˚C[2]

TUBE OUTLINE DIMENSIONS

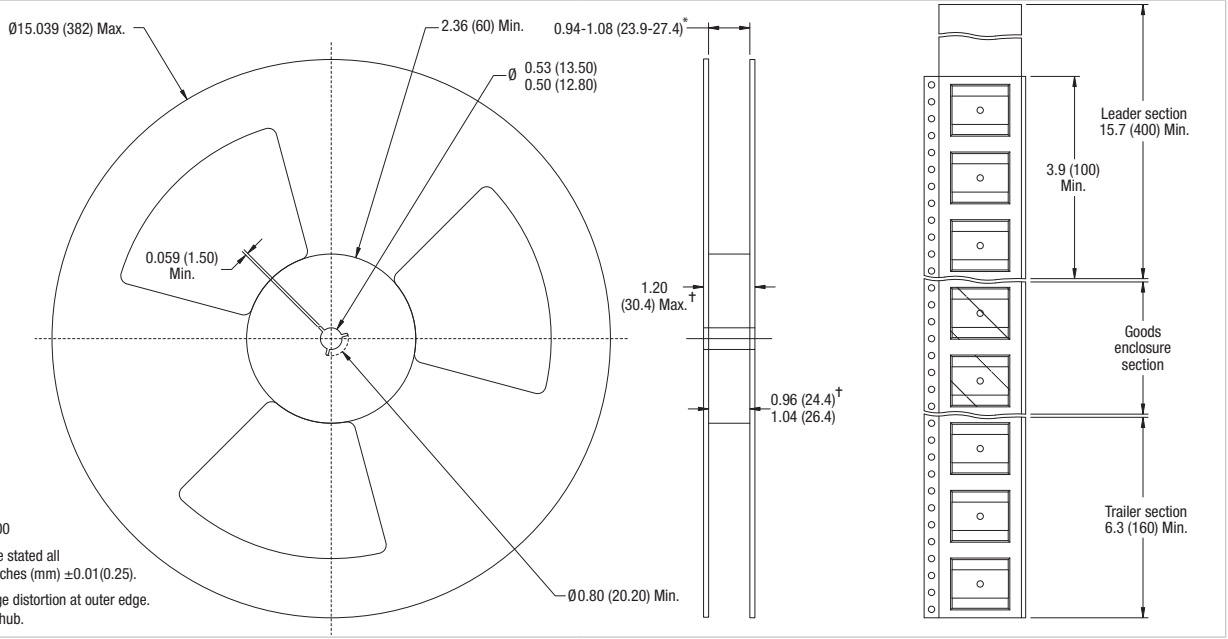


Tube length: 18.3±0.08 (465±2). Tube quantity: 50.
Tube material: Antistatic coated clear pvc.
Unless otherwise stated all dimensions in inches(mm) ±0.01 (0.25).

All specifications typical at T_A=25°C
1 For further information, please visit www.murata-ps.com/rohs
2 For high temperature reflow parts see 78253J series.

TAPE & REEL SPECIFICATIONS

REEL OUTLINE DIMENSIONS

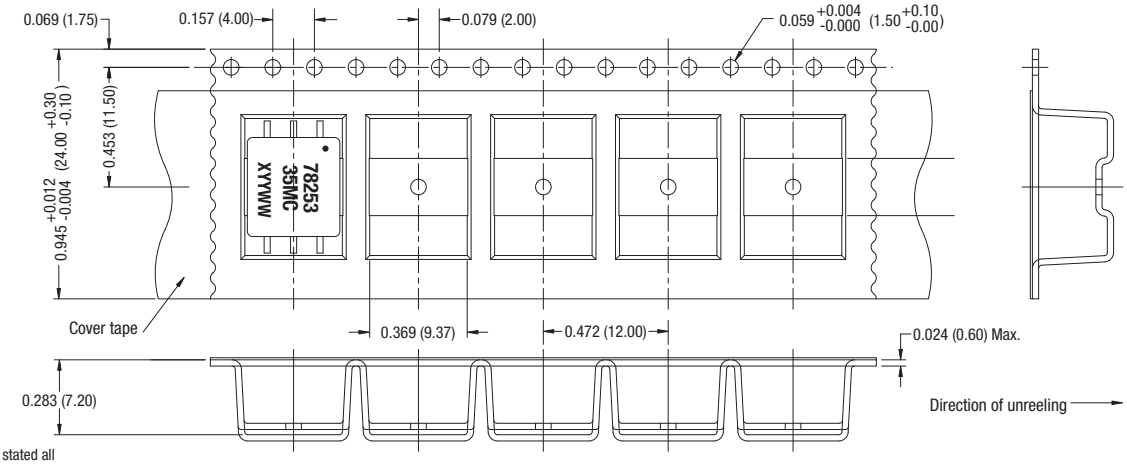


Reel quantity: 500

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

* Includes flange distortion at outer edge.
† Measured at hub.

TAPE OUTLINE DIMENSIONS



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