



**DESCRIPTION:** TP250MV/TP250MVA1 Compatible Converter

The **TP250MV** of converter transformers are specifically designed for use with Maxim chipsets to provide isolated RS232 interfaces. Carefully controlled turns ratios ensure consistent performance whilst a toroidal construction minimises EMI.

**FEATURES**

RoHS compliant	Industrial temperature range	Isolation to 4KVDC
Industry-standard pinout	Surface mount option	UL 94 V-0 package materials
Low profile	Toroidal construction	Fully encapsulated

**FEATURES**

Part Number	Turn Ratio
TP250MV	1: 1
TP250MV/5H	1: 1
TP250MVA1	1: 1.2
TP250MVA2	1: 1.2 ( 1/2 encapsulated UR5097 Electrolube )

**CHARACTERISTICS**

Parameter	Conditions	Min.	Typ.	Max.	Units
Primary Inductance, $L_P$ (Pri.1-2)	10kHz, 100mV	0.75	2.0	2.5	mH
Leakage Inductance, $L_L$	100kHz, 100mV		35	40	$\mu$ H
Interwinding Capacitance, $C_{ww}$	100kHz, 100mV		9	12	pF
Primary D.C. Resistance, $R_{DC}$	<0.1VDC		1.4	1.8	$\Omega$
Volt-time Product, Et	Pins1/2 or 2/3	50			V $\mu$ s

**ORDER CODE DETAILS**

Order Code	Package Type	Packaging Type	Quantity
TP250MV	6 Pin SM	Tube	50
TP250MV-R	6 Pin SM	Tape & Reel	500

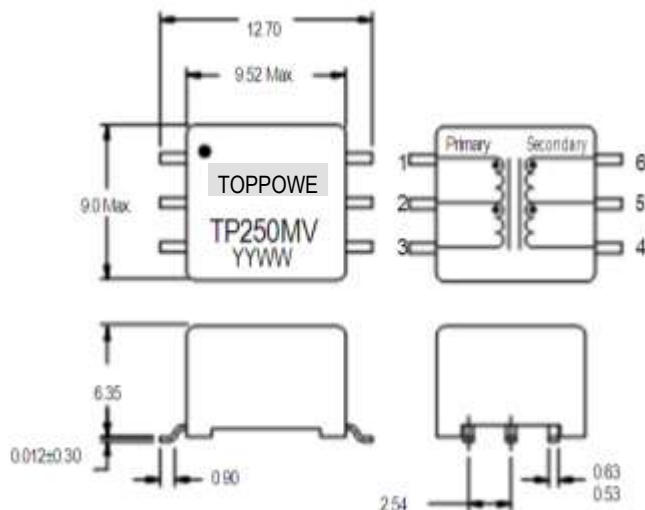
**ABSOLUTE MAXIMUM RATINGS**

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, $I_{PK}$	300mA
Isolation voltage TP250MV (flash tested for 1 second)	4KVDC
Isolation voltage TP250MV/5H (flash tested for 1 second)	5KVDC

All specifications typical at TA=25°C

**MECHANICAL DIMENSIONS**

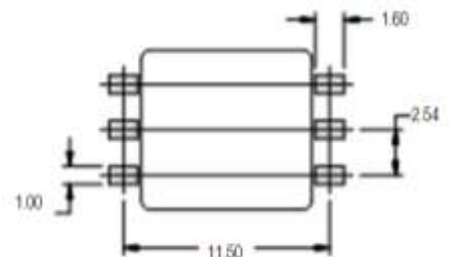
**6 Pin SM**



Unless otherwise stated all dimensions in inches  $\pm 0.25$ mm.  
 All pins on a 2.54mm pitch and within  $\pm 0.25$ mm of true position.  
 \* Pin 5 is connected to secondary center tap. Package Weight 1.0g TYP.

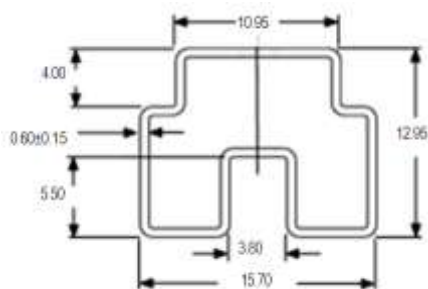
**RECOMMENDED FOOTPRINT DETAILS**

**6 Pin SM**



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

**TUBE OUTLINE DIMENSIONS**



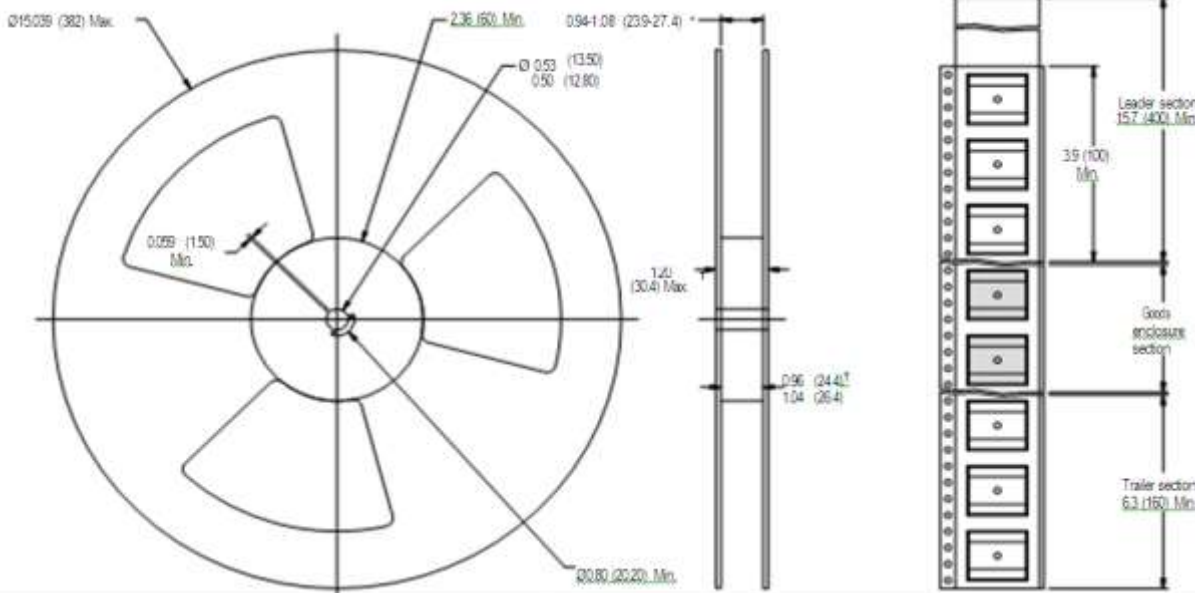
Unless otherwise stated all dimensions in inches (mm)  $\pm 0.25$ .  
 Tube length:  $18.3 \pm 0.08$  ( $465 \pm 2$ ).  
 Tube material: Antistatic coated clear pvc.

**SOLDERING INFORMATION**

Pin finish	Matte tin
Peak wave solder temperature	300°C for 10 seconds
Peak reflow temperature	220°C

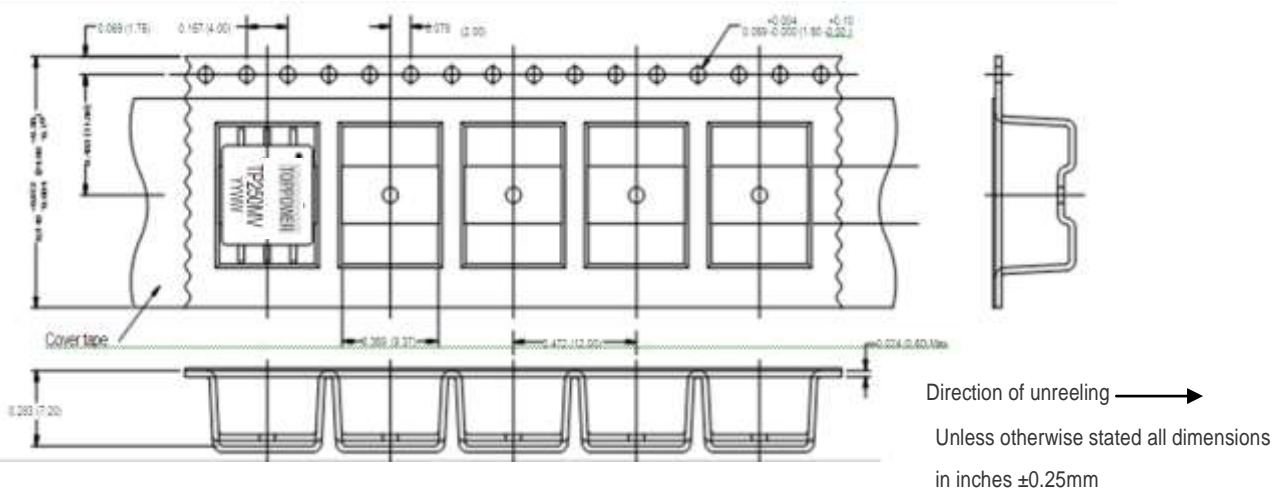
**TAPE & REEL SPECIFICATIONS**

**REEL OUTLINE DIMENSIONS**



Unless otherwise stated all dimensions in inches (mm)  $\pm 0.01$  (0.25).  
 \*Includes flange distortion at outer edge. t Measured at hub.

**TAPE OUTLINE DIMENSIONS**



Direction of unreeling  $\rightarrow$   
 Unless otherwise stated all dimensions in inches  $\pm 0.25$ mm