

Features

- ◆ Ultracompact SMD-package
- ◆ I/O isolation 4000 VACrms rated for working voltages up to 300 Vrms
- ◆ Operating temp. range -25°C to $+80^{\circ}\text{C}$
- ◆ Qualified for leadfree reflow solder process
- ◆ Available in tape & reel package



The TES 2M series is range of compact 2W DC/DC-converters providing a high I/O-isolation voltage of 4000 VAC. With a reinforced I/O-isolation system this product is an economical solution for many applications in instrumentation, industrial controls, medical equipment and everywhere where supplementary- or reinforced insulation is required.

These converters are qualified for high solder temperature profiles in leadfree solder processes. For automated SMD production lines the devices can be supplied in tape & reel package. Full SMD-design with exclusive use of ceramic capacitors ensure a very high reliability and a long product lifetime.

Models

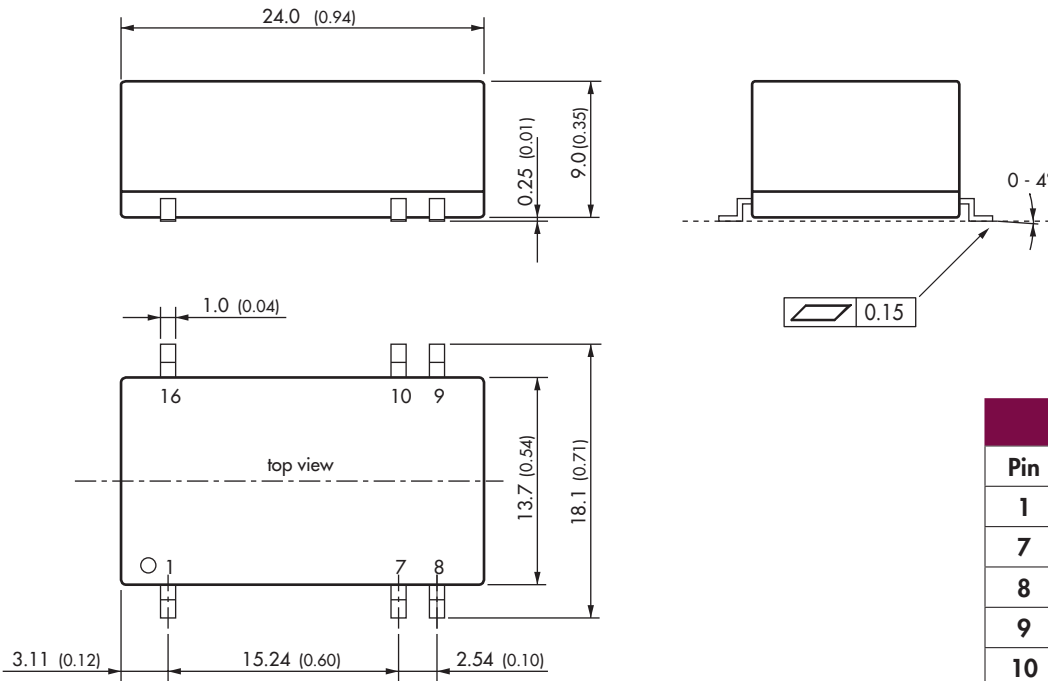
Ordercode	Input voltage range	Output voltage	Output current max.	Efficiency typ.
TES 2-0511M	5.0 VDC $\pm 10\%$ (nominal 0.5 VDC)	5 VDC	400 mA	66 %
TES 2-0512M		12 VDC	165 mA	66 %
TES 2-0513M		15 VDC	133 mA	66 %
TES 2-0522M		± 12 VDC	± 83 mA	72 %
TES 2-0523M		± 15 VDC	± 66 mA	73 %
TES 2-1211M	12.0 VDC $\pm 10\%$ (nominal 1.2 VDC)	5 VDC	400 mA	66 %
TES 2-1212M		12 VDC	165 mA	66 %
TES 2-1213M		15 VDC	133 mA	66 %
TES 2-1222M		± 12 VDC	± 83 mA	74 %
TES 2-1223M		± 15 VDC	± 66 mA	75 %
TES 2-2411M	24 VDC $\pm 10\%$ (nominal 2.4 VDC)	5 VDC	400 mA	66 %
TES 2-2412M		12 VDC	165 mA	66 %
TES 2-2413M		15 VDC	133 mA	66 %
TES 2-2422M		± 12 VDC	± 83 mA	74 %
TES 2-2423M		± 15 VDC	± 66 mA	75 %

Physical Specifications

Casing material	plastic
Weight	3.8 g (0.13oz)
Lead-free reflow solder process	as per J-STD-020D.01 (to find at: www.jedec.org - free registration required)
Moisture sensitivity level (MSL)	level 2 as per J-STD-033B.01 (to find at: www.jedec.org - free registration required)
Washing process	www.tracopower.com/products/smd-wash.pdf
Packaging	www.tracopower.com/products/tes2m-pack.pdf

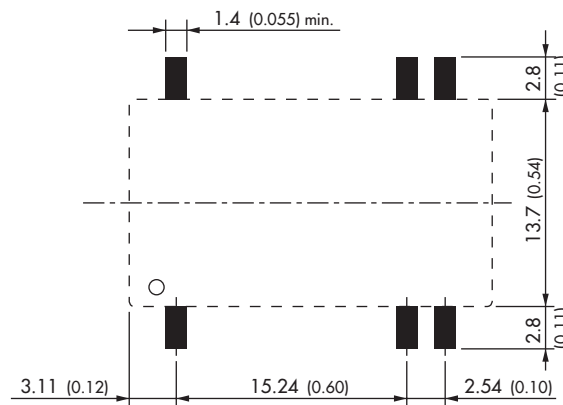
Application note: www.tracopower.com/products/tes2m-application.pdf

Outline Dimensions



Pin-Out		
Pin	Single	Dual
1	-Vin (GND)	-Vin (GND)
7	No con.	No con.
8	No con.	Common
9	+Vout	+Vout
10	-Vout	-Vout
16	+Vin	+Vin

Solder Pad Dimension



Dimensions in [mm], () = Inch
Tolerances ± 0.25 (± 0.01)
Pin pitch tolerances ± 0.05 (± 0.002)

Specifications can be changed without notice! Make sure you are using the latest documentation, downloadable at www.tracopower.com