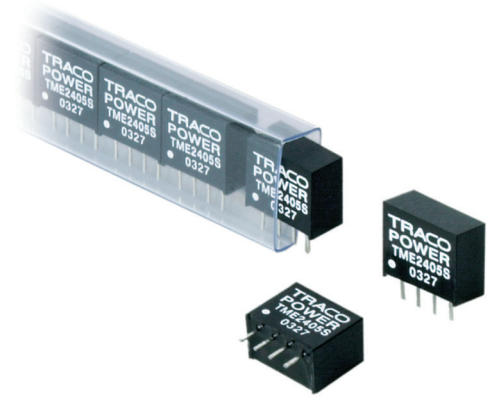


#### Features

- ◆ Single-in-line package (SIP)
- ◆ I/O isolation 1'000 VDC
- ◆ High efficiency up to 80%
- ◆ Operating temperature  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
- ◆ Industry standard pinout
- ◆ 100% burn-in (8 h)
- ◆ Lead free design, RoHS compliant
- ◆ 3-year product warranty



The TME series is a range of sub-miniature, isolated DC/DC-converters in a SIP-package, which requires only 0.7 cm<sup>2</sup> of board space. They provide a cost effective solution to generate supplementary, isolated voltages. Full SMD-design and a 100% production test of parameters ensure a high reliability of this product.

Models				
Ordercode	Input voltage	Output voltage	Output current max.	Efficiency typ.
TME 0303S	3.3 VDC $\pm 10\%$	3.3 VDC	260 mA	74 %
TME 0305S		5.0 VDC	200 mA	77 %
TME 0503S	5 VDC $\pm 10\%$	3.3 VDC	260 mA	72 %
TME 0505S		5 VDC	200 mA	69 %
TME 0509S		9 VDC	110 mA	76 %
TME 0512S		12 VDC	84 mA	77 %
TME 0515S		15 VDC	67 mA	78 %
TME 1205S	12 VDC $\pm 10\%$	5 VDC	200 mA	71 %
TME 1209S		9 VDC	110 mA	77 %
TME 1212S		12 VDC	84 mA	79 %
TME 1215S		15 VDC	67 mA	80 %
TME 2405S	24 VDC $\pm 10\%$	5 VDC	200 mA	70 %
TME 2409S		9 VDC	110 mA	76 %
TME 2412S		12 VDC	84 mA	79 %
TME 2415S		15 VDC	67 mA	79 %

### Input Specifications

Input current no load /full load	3.3 Vin models: 35 mA / 370 mA typ. 5 Vin models: 30 mA / 270 mA typ. 12 Vin models: 13 mA / 110 mA typ. 24 Vin models: 7 mA / 55 mA typ.
Surge voltage (1 s max.)	3.3 Vin models: 6 V max. 5 Vin models: 9 V max. 12 Vin models: 18 V max. 24 Vin models: 30 V max.
Reverse polarity input current	0.3 A max.
Reflected input ripple current	can be reduced by ext. 1 – 3.3 µF polyester film capacitor
Input filter	Internal capacitors

### Output Specifications

Voltage set accuracy	±1 % typ. / ±3 % max.
Regulation	– Input variation (1 % change of input voltage) – Load variation (20 – 100 %) 1.2 % typ. / 1.5 % max. 4 to 14 % max. (depending on model)
Ripple and noise (20 MHz Bandwidth)	150 mVp-p max.
Temperature coefficient	±0.01 %/K typ. / ±0.02 %/K max.
Short circuit protection	limited 0.5 s max.
Capacitive load	33 µF max.

### General Specifications

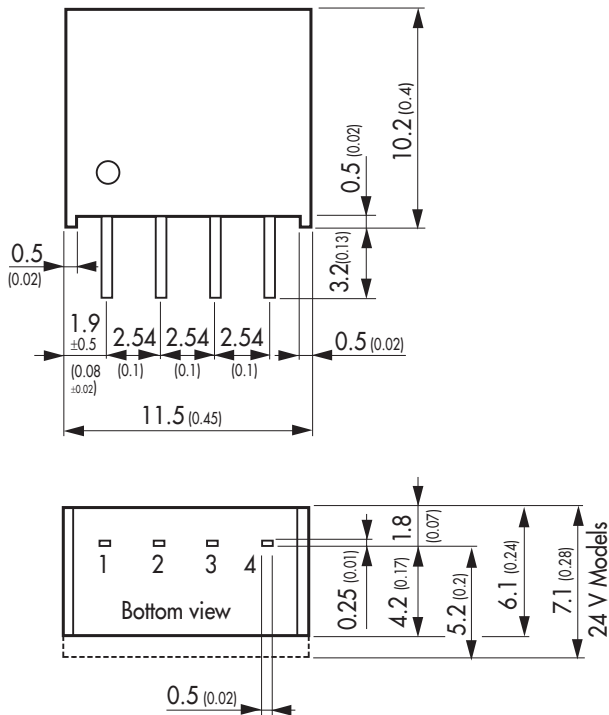
Temperature ranges	– Operating – Case temperature – Storage	–40°C to +85°C +90°C max. –50°C to +125°C
Derating	5 VDC output models: other output models:	3.3 %/K above 70°C 4.0 %/K above 75°C
Humidity (non condensing)		95 % rel H max.
Reliability, calculated MTTF (MIL-HDBK-217F, @+25°C ground benign)		>2'000'000 h
Isolation voltage (60 sec.)	Input/Output	1'000 VDC
Isolation capacity	Input/Output	60 pF typ.
Isolation resistance	Input/Output	>1'000 Mohm
Switching frequency		50 to 110 kHz (Frequency modulation)

All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

**Physical Specifications**

Casing material	non conductive black plastic (UL 94-V0 rated)	
Package weight	3.3 / 5.0 / 12 Vin models 24 Vin models	1.3 g (0.05 oz) 1.7 g (0.06 oz)
Soldering temperature	max. 265°C / 10 s	

**Outline Dimensions mm (inches)**



Pin-Out	
Pin	Single
1	-Vin (GND)
2	+Vin (Vcc)
3	-Vout
4	+Vout

Tolerances  $\pm 0.25$  ( $\pm 0.01$ )  
 Pin pitch tolerance  $\pm 0.13$  ( $\pm 0.005$ )  
 pins  $\pm 0.05$  ( $\pm 0.002$ )

Specifications can be changed without notice! Make sure you are using the latest documentation, downloadable at [www.tracopower.com](http://www.tracopower.com)