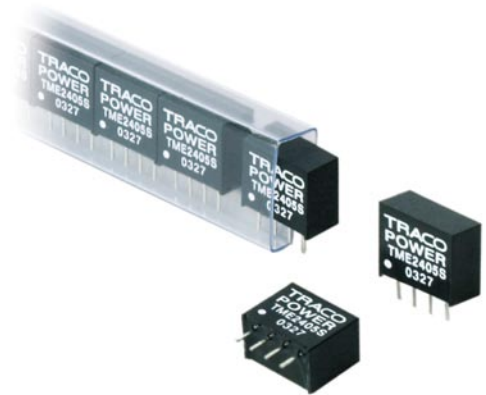




#### Features

- ◆ 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 0505S	5 VDC $\pm 10\%$	5 VDC	200 mA	70 %
TME 0509S		9 VDC	110 mA	76 %
TME 0512S		12 VDC	80 mA	77 %
TME 0515S		15 VDC	65 mA	78 %
TME 1205S	12 VDC $\pm 10\%$	5 VDC	200 mA	71 %
TME 1209S		9 VDC	110 mA	77 %
TME 1212S		12 VDC	80 mA	79 %
TME 1215S		15 VDC	65 mA	80 %
TME 2405S	24 VDC $\pm 10\%$	5 VDC	200 mA	70 %
TME 2409S		9 VDC	110 mA	76 %
TME 2412S		12 VDC	80 mA	79 %
TME 2415S		15 VDC	65 mA	79 %

### Input Specifications

Input current no load /full load	5 Vin models	30 mA / 290 mA typ.
	12 Vin models	15 mA / 120 mA typ.
	24 Vin models	10 mA / 60 mA typ.
Surge voltage (1 sec. max.)	5 Vin models	9 V max.
	12 Vin models	18 V max.
	24 Vin models	30 V max.
Reverse voltage protection		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		± 3 %
Regulation	– Input variation	1.2 % / 1 % change Vin
	– Load variation 20 – 100 %	10 % max.
Ripple and noise (20 MHz Bandwidth)		150 mV pk-pk max.
Temperature coefficient		± 0.02 % / K
Short circuit protection		limited 1 sec. max.
Capacitive load		33 µF max.

### General Specifications

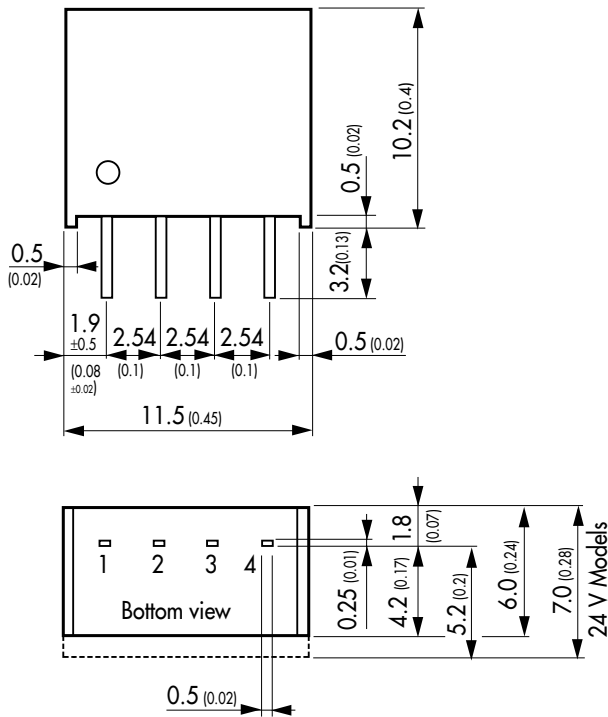
Temperature ranges	– Operating	–40 °C ... +85 °C
	– Case temperature	+95 °C max.
	– Storage	–40 °C ... +105 °C
Humidity (non condensing)		95 % rel H max.
Reliability, calculated MTBF (MIL-HDBK-217E)		>2'000'000 h @ 25 °C
Isolation voltage (60 sec.)	Input/Output	1'000 VDC
Isolation capacity	Input/Output	60 pF typ.
Isolation resistance	Input/Output	>1'000 Mohm
Switching frequency		90 kHz typ. (Frequency modulation)
Frequency change over line and load		± 30 % max.

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

**Physical Specifications**

Case material	non conductive black plastic (UL 94-V0 rated)	
Package weight	5 Vin & 12 Vin models	1.3 g (0.05 oz)
	24 Vin models	1.7 g (0.06 oz)
Soldering temperature	max. 265°C / 10 sec	

**Outline Dimensions mm (inches)**



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

Tolerances  $\pm 0.25$  (0.01)  
pins  $\pm 0.05$  (0.002)

Specifications can be changed any time without notice