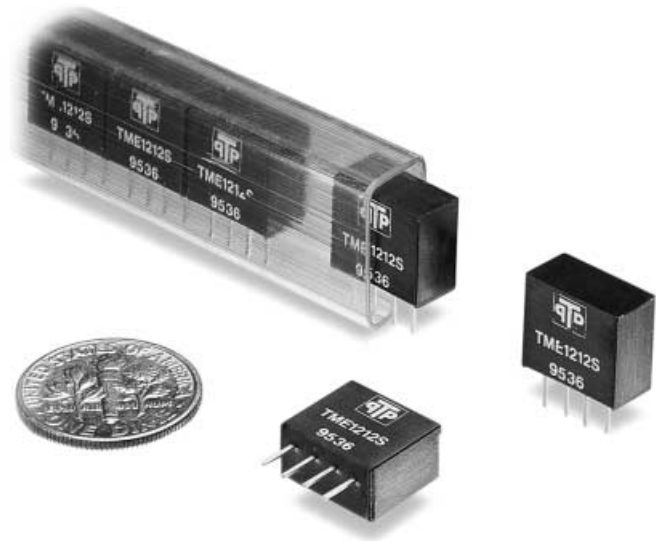


Features

- Single-in-Line Package (SIP)
- I/O-Isolation 1'000 VDC
- High Efficiency up to 80%
- Operating Temperature -40°C to +85°C
- Pin-compatible with other Manufacturers
- 100% Burn-in (8 h)
- 2 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 cm² 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 TME 0509S TME 0512S TME 0515S | 5 VDC ±10% | 5 VDC 9 VDC 12 VDC 15 VDC | 200 mA 110 mA 80 mA 65 mA | 70 % 76 % 77 % 78 % |
| TME 1205S TME 1509S TME 1212S TME 1215S | 12 VDC ±10% | 5 VDC 9 VDC 12 VDC 15 VDC | 200 mA 110 mA 80 mA 65 mA | 71 % 77 % 79 % 80 % |
| TME 2405S TME 2409S TME 2412S TME 2415S | 24 VDC ±10% | 5 VDC 9 VDC 12 VDC 15 VDC | 200 mA 110 mA 80 mA 65 mA | 70 % 76 % 79 % 79 % |

Input Specifications

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

General Specifications

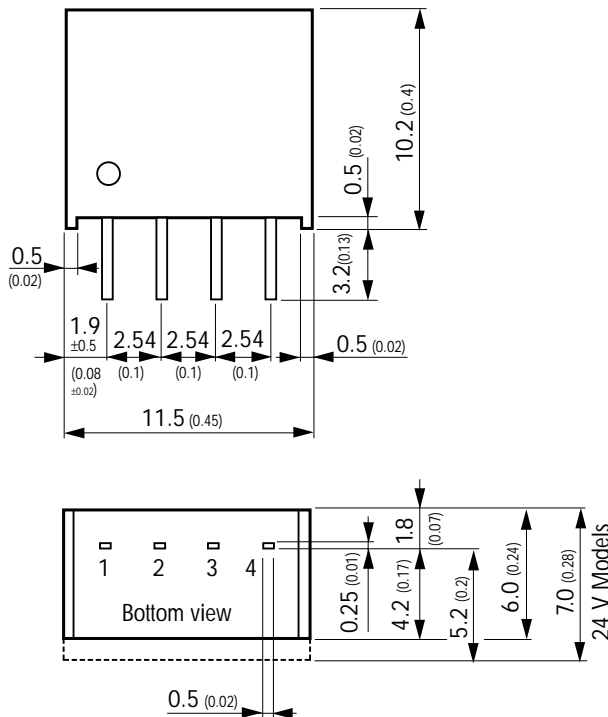
| | | |
|---|--|---|
| Temperature ranges | – Operating – Case temperature – Storage | – 40 °C ... +85 °C + 95 °C max. – 40 °C ... +105 °C |
| Humidity (non condensing) | | 95 % rel H max. |
| Reliability, calculated MTBF (MIL-HDBK-217 E) | | > 2'000'000 h @ 25 °C |
| Isolation voltage | Input/Output | 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 (flammability to UL 94-V0) |
| Package weight | 5 Vin & 12 Vin models 24 Vin models | 1.3 g (0.05 oz) 1.7 g (0.06 oz) |
| Soldering temperature | | max. 260°C / 10 sec |

Outline Dimensions mm (inches)



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

Tolerances ± 0.25 (0.01)
pins ± 0.05 (0.002)

Specifications can be changed without notice