

Features

- ◆ Highest power density in SIP package
- ◆ Wide 2:1 input voltage range
- ◆ Ultra-compact SIP-8 package
- ◆ Smallest footprint 6W converter
- ◆ Full SMD design
- ◆ Temperature range -40° to $+65^{\circ}\text{C}$
- ◆ High efficiency up to 86%
- ◆ Indefinite short-circuit protection
- ◆ I/O isolation 1500 VDC
- ◆ Remote On/Off control
- ◆ Fully RoHS compliant
- ◆ 3-year product warranty



The TMR-6 series is a new family of isolated 6W dc-dc converter modules with regulated output, featuring wide 2:1 input voltage ranges. The product comes in an ultra-compact SIP-8 plastic package with a small footprint occupying only 2.0 cm² (0.3 square in.) of board space.

An excellent efficiency allows -40° to $+65^{\circ}\text{C}$ operation temperatures. Further features include remote On/Off control and continuous short circuit protection. The very compact dimensions of these converters make them an ideal solution for many space critical applications in communication equipment, instrumentation and industrial electronics.

Models

| Order code | Input voltage range | Output voltage | Output current max. | Efficiency typ. |
|------------|----------------------------------|----------------|---------------------|-----------------|
| TMR 6-0510 | 4.5 – 9.0 VDC (5 VDC nominal) | 3.3 VDC | 1300 mA | 77 % |
| TMR 6-0511 | | 5 VDC | 1200 mA | 81 % |
| TMR 6-0519 | | 9 VDC | 666 mA | 83 % |
| TMR 6-0512 | | 12 VDC | 500 mA | 84 % |
| TMR 6-0513 | | 15 VDC | 400 mA | 84 % |
| TMR 6-0515 | | 24 VDC | 250 mA | 84 % |
| TMR 6-0521 | | ± 5 VDC | ± 600 mA | 81 % |
| TMR 6-0522 | | ± 12 VDC | ± 250 mA | 84 % |
| TMR 6-0523 | | ± 15 VDC | ± 200 mA | 84 % |
| TMR 6-1210 | 9 – 18 VDC (12 VDC nominal) | 3.3 VDC | 1300 mA | 78 % |
| TMR 6-1211 | | 5 VDC | 1200 mA | 83 % |
| TMR 6-1219 | | 9 VDC | 666 mA | 84 % |
| TMR 6-1212 | | 12 VDC | 500 mA | 85 % |
| TMR 6-1213 | | 15 VDC | 400 mA | 85 % |
| TMR 6-1215 | | 24 VDC | 250 mA | 84 % |
| TMR 6-1221 | | ± 5 VDC | ± 600 mA | 82 % |
| TMR 6-1222 | | ± 12 VDC | ± 250 mA | 83 % |
| TMR 6-1223 | | ± 15 VDC | ± 200 mA | 84 % |
| TMR 6-2410 | 18 – 36 VDC (24 VDC nominal) | 3.3 VDC | 1300 mA | 78 % |
| TMR 6-2411 | | 5 VDC | 1200 mA | 83 % |
| TMR 6-2419 | | 9 VDC | 666 mA | 84 % |
| TMR 6-2412 | | 12 VDC | 500 mA | 85 % |
| TMR 6-2413 | | 15 VDC | 400 mA | 86 % |
| TMR 6-2415 | | 24 VDC | 250 mA | 85 % |
| TMR 6-2421 | | ± 5 VDC | ± 600 mA | 82 % |
| TMR 6-2422 | | ± 12 VDC | ± 250 mA | 84 % |
| TMR 6-2423 | | ± 15 VDC | ± 200 mA | 84 % |
| TMR 6-4810 | 36 – 75 VDC (48 VDC nominal) | 3.3 VDC | 1300 mA | 78 % |
| TMR 6-4811 | | 5 VDC | 1200 mA | 82 % |
| TMR 6-4819 | | 9 VDC | 666 mA | 84 % |
| TMR 6-4812 | | 12 VDC | 500 mA | 85 % |
| TMR 6-4813 | | 15 VDC | 400 mA | 86 % |
| TMR 6-4815 | | 24 VDC | 250 mA | 84 % |
| TMR 6-4821 | | ± 5 VDC | ± 600 mA | 82 % |
| TMR 6-4822 | | ± 12 VDC | ± 250 mA | 84 % |
| TMR 6-4823 | | ± 15 VDC | ± 200 mA | 85 % |

General Specifications

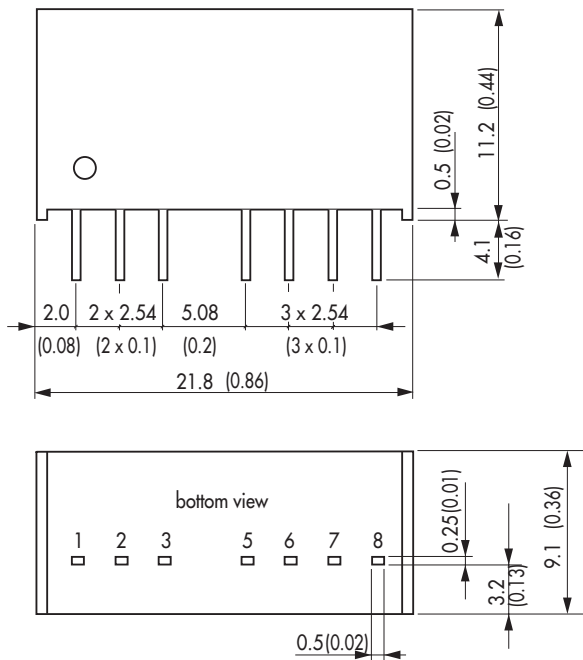
| | |
|---|--|
| Reliability, calculated MTBF (MIL-HDBK-217F, at +25°C, ground benign) | >2.4 Mio h |
| Isolation voltage (60sec.) – Input/Output | 1500 VDC |
| Isolation capacitance – Input/Output | 50 pF max. |
| Isolation resistance – Input/Output (500 VDC) | >10 GOhm |
| Switching frequency | 100 kHz min. (PFM) |
| Remote On/Off | – On: open or high impedance – Off: 2...4 mA current applied via 1KOhm resistor – Off stand by input current 2.5 mA max. |
| Safety standards | IEC/EN 60950-1, UL 60950-1 |
| Altitude during operation | 4'000 m max. (13'120 ft) approved |
| Environmental compliance | – Reach www.tracopower.com/products/tmr6-reach.pdf – RoHS RoHS directive 2011/65/EU |

Physical Specifications

| | |
|------------------|---------------------------|
| Casing material | non-conductive plastic |
| Potting material | silicon, (UL 94V-0 rated) |
| Weight | 4.8 g (0.17oz) |

Application note: www.tracopower.com/products/tmr6-application.pdf

Outline Dimensions



| Pin-Out | | |
|---------|---------------|---------------|
| Pin | Single | Dual |
| 1 | -Vin (GND) | -Vin (GND) |
| 2 | +Vin (Vcc) | +Vin (Vcc) |
| 3 | Remote On/Off | Remote On/Off |
| 5 | No function | No function |
| 6 | +Vout | +Vout |
| 7 | -Vout | Common |
| 8 | No function | -Vout |

Dimensions in [mm], () = Inch
Tolerances: ±0.5 (±0.02)
Pin pitch tolerances: ±0.25 (±0.01)

Specifications can be changed any time without notice.