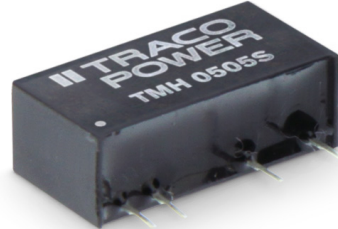


Features

- ◆ Single-in-line package (SIP)
- ◆ Fully SMD-design
- ◆ Isolated single and dual output
- ◆ I/O isolation 1'000 VDC
- ◆ Unregulated device
- ◆ High efficiency up to 83 %
- ◆ Industry standard pinout
- ◆ 100% burn-in (8 h)
- ◆ Lead free design, RoHS compliant
- ◆ 3-year product warranty



The TMH series are ultra miniature, isolated 2 Watt DC/DC-converters in a Single-in-Line package (SIP). Requiring only 1.5 cm² board space they offer the ideal solution in many space critical applications for board level power distribution. The use of SMD-technology makes it possible to offer a product with high performance at low cost.

Models

Ordercode	Input voltage	Output voltage	Output current max.	Efficiency typ.
TMH 0505S	5 VDC ±10%	5 VDC	400 mA	76 %
TMH 0512S		12 VDC	165 mA	80 %
TMH 0515S		15 VDC	133 mA	80 %
TMH 0505D		±5 VDC	±200 mA	77 %
TMH 0512D		±12 VDC	±83 mA	79 %
TMH 0515D		±15 VDC	±66 mA	79 %
TMH 1205S		12 VDC ±10%	5 VDC	400 mA
TMH 1212S	12 VDC		165 mA	82 %
TMH 1215S	15 VDC		133 mA	83 %
TMH 1205D	±5 VDC		±200 mA	79 %
TMH 1212D	±12 VDC		±83 mA	82 %
TMH 1215D	±15 VDC		±66 mA	82 %
TMH 2405S	24 VDC ±10%		5 VDC	400 mA
TMH 2412S		12 VDC	165 mA	81 %
TMH 2415S		15 VDC	133 mA	82 %
TMH 2405D		±5 VDC	±200 mA	79 %
TMH 2412D		±12 VDC	±83 mA	81 %
TMH 2415D		±15 VDC	±66 mA	82 %

Input Specifications

Input current no load / full load	5 Vin models	60 mA / 510 mA typ.
	12 Vin models	30 mA / 200 mA typ.
	24 Vin models	15 mA / 100 mA typ.
Surge voltage (1 s max.)	5 Vin models	9 V max.
	12 Vin models	18 V max.
	24 Vin models	30 V max.
Reflected input ripple current	can be reduced by ext. 1 – 3.3 µF polyester film capacitor	
Conducted noise (input)	EN 55032 class A (external filter)	
Radiated noise (input)	EN 55032 class A (internal filter)	
Input filter	Internal Pi-Type	

Output Specifications

Voltage set accuracy	±1 % typ. / ±3 % max.	
Voltage balance (dual output models, balanced loads)	0.1 % typ. / 1 % max.	
Regulation	– Input variation (1 % input voltage change)	1.2 % typ. / 1.5 % max.
	– Load variation (20 – 100 %)	5 to 11 % max. (depending on model)
Ripple and noise (20 MHz Bandwidth)	100 mVp-p typ. / 150 mVp-p max.	
Temperature coefficient	±0.01 %/K typ. / ±0.02 %/K max.	
Short circuit protection	limited 0.5 s max.	
Capacitive load	– Single output models	470 µF max.
	– Dual output models	390 µF max.

General Specifications

Temperature ranges	– Operating	–40°C to +85°C
	– Case temperature	+105°C max.
	– Storage	–50°C to +125°C
Derating (natural convection)	3 %/K above +70°C	
Humidity (non condensing)	95 % rel H max.	
Reliability, calculated MTBF (MIL-HDBK-217F at +25°C, ground benign)	>3'300'000 h	
Isolation voltage (60 s)	– Input/Output	1'000 VDC
Isolation capacitance	– Input/Output	80 pF typ.
Isolation resistance	– Input/Output	>1'000 Mohm
Switching frequency	50 to 100 kHz (frequency modulation)	
Environmental compliance	– Reach Declaration	www.tracopower.com/info/reach-declaration.pdf REACH SVHC list compliant REACH Annex XVII compliant
	– RoHS Declaration	www.tracopower.com/info/rohs-declaration.pdf Exemptions: 7a (RoHS exemptions refer to the component concentration only, not to the overall concentration in the product (O5A rule). The SCIP number is provided on request.)

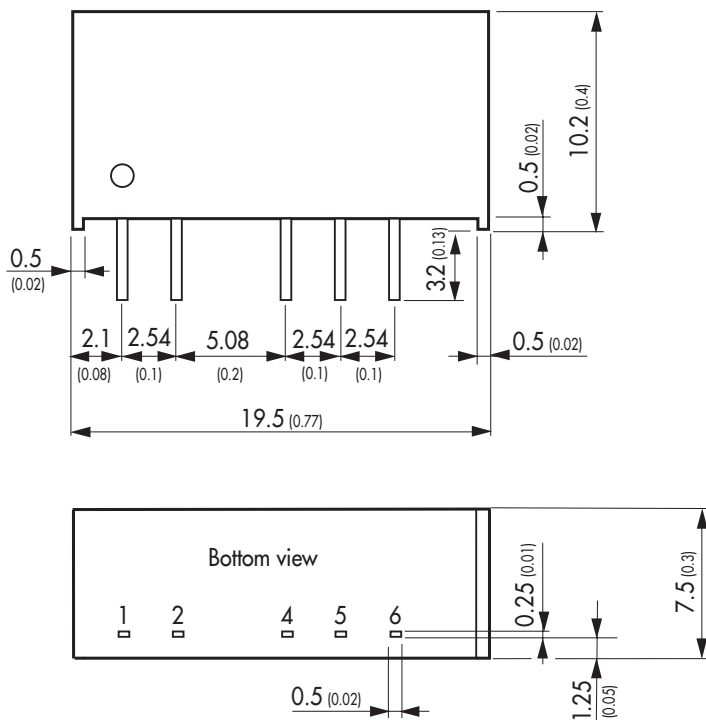
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Physical Specifications

Casing material	non conductive black plastic (UL 94-V0 rated)
Package weight	2.7 g (0.1oz)
Soldering temperature	max. +265°C / 10 s

Supporting documents: www.tracopower.com/overview/tmh

Outline Dimensions mm (inches)



Pin-Out		
Pin	Single	Dual
1	+Vin (Vcc)	+Vin (Vcc)
2	-Vin (GND)	-Vin (GND)
4	-Vout	-Vout
5	No pin	Common
6	+Vout	+Vout

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

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