



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Features

- ◆ Single-in-line package (SIP)
- ◆ Fully SMD-design
- ◆ Isolated single and dual output
- ◆ I/O isolation 1'000 VDC
- ◆ 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	78 %
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	77 %
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.
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		±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

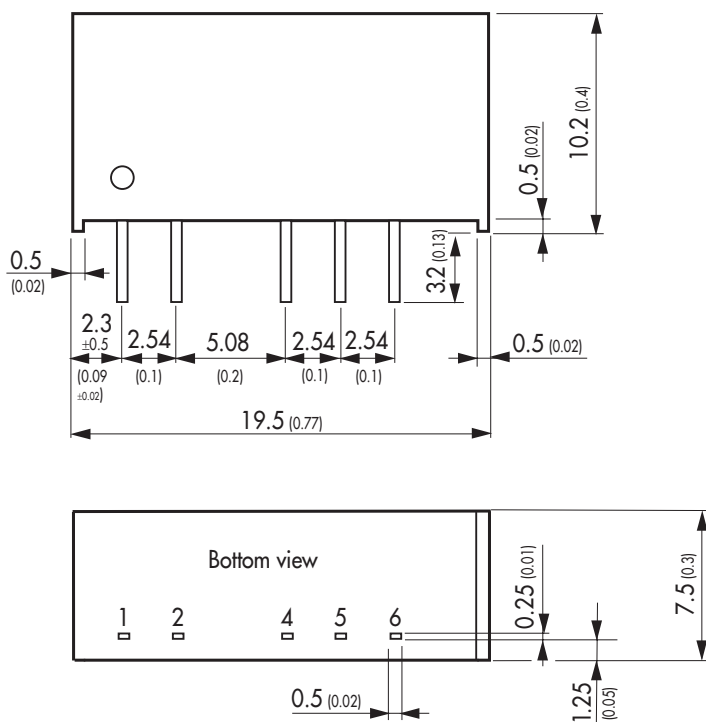
Temperature ranges	– Operating	–40°C to +85°C
	– Case temperature	+90°C max.
	– Storage	–50°C to +125°C
Derating (natural convection)		3 %/K above +70°C
Humidity (non condensing)		95 % rel H max.
Reliability, calculated MTBF (MIL-HDBK-217F at +25°C, ground benign)		>2'000'000 h
Isolation voltage (60 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	www.tracopower.com/products/reach-declaration.pdf
	– RoHS	RoHS directive 2002/95/EC

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

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