imall

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!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832 Email & Skype: info@chipsmall.com Web: www.chipsmall.com Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





DC/DC Converters

TMR 2WI Series, 2 Watt

Features

- Ultra-wide 4:1 input range
- SIP-9 package
- Full SMD design
- Temperature range –40 to +85°C
- High efficiency
- Excellent load and line regulation
- Indefinite short-circuit protection
- I/O isolation 1500 VDC
- Remote On/Off control
- Fully RoHS compliant
- 3-year product warranty



The TMR-2WI series is a new family of isolated 2W dc-dc converter modules with regulated output, featuring ultra-wide 4:1 input voltage ranges of 9-36 VDC or 18-75 VDC. The product comes in a ultra-compact SIP-9 plastic package.

An excellent efficiency up to 84% allows -40° C to $+85^{\circ}$ C operation temperatures at full load. Further features include remote On/Off control and continuous short circuit protection. Typical applications for these ultra-compact converters are battery operated equipment and distributed power architectures in communication, instrumentation and industrial electronics, everywhere where space on the PCB is critical.

odels				
Ordercode	Input voltage range	Output voltage	Output current max.	Efficiency typ.
TMR 2-2410WI	9 – 36 VDC (24 VDC nominal)	3.3 VDC	500 mA	71 %
TMR 2-2411WI		5 VDC	400 mA	76 %
TMR 2-2412WI		12 VDC	165 mA	79 %
TMR 2-2413WI		15 VDC	135 mA	80 %
TMR 2-2421WI		±5 VDC	±200 mA	73 %
TMR 2-2422WI		±12 VDC	±85 mA	77 %
TMR 2-2423WI		±15 VDC	±65 mA	79 %
TMR 2-4810WI	18 – 75 VDC (48 VDC nominal)	3.3 VDC	500 mA	70 %
TMR 2-4811WI		5 VDC	400 mA	72 %
TMR 2-4812WI		12 VDC	165 mA	78 %
TMR 2-4813WI		15 VDC	135 mA	78 %
TMR 2-4821WI		±5 VDC	±200 mA	70 %
TMR 2-4822WI		±12 VDC	±85 mA	76 %
TMR 2-4823WI		±15 VDC	±65 mA	76 %

TRACO[®] POWER

Input Specifications			
Input current at no load (no	minal input)	24 Vin models: 48 Vin models:	20 mA typ. 15 mA typ.
Input current at full load (no	ominal input)	24 Vin models: 48 Vin models:	110 mA typ. 55 mA typ.
Surge voltage (100 msec. n	nax.)	24 Vin models: 48 Vin models:	50 V max. 100 V max.
Reverse voltage protection			0.5 A max.
Input Filter			capacitor type
Start up time			<1ms (at nominal input and resistive load)
Output Specification	S		
Voltage set accuracy			±2 %
Regulation	– Input variation Vin min. to Vir – Load variation 25 – 100 %	n max. single output models: dual output models:	0.5 % max. 0.75 % max. 2.0 % max. (balanced load)
Minimum load			25 % of rated max current (operation at lower load condition is safe but a higher output ripple will be experianced)
Temperature coefficient			±0.02 %/°C max.
Ripple and noise (20 MHz	Bandwidth)		50 mVpk-pk max
Transient response (25 % la	oad step change)		300 µs max.
Short circuit protection			continuous (automatic recovery)
Capacitive load		3.3 VDC models: 5 VDC models: 12 VDC models: ±5 VDC models: ±12 VDC models: ±12 VDC models: ±15 VDC models:	2'200 μF max. 1'000 μF max. 170 μF max. 110 μF max. 470 μF max. (each output) 100 μF max. (each output) 47 μF max. (each output)
General Specificatio	ns		
Temperature ranges	– Operating – Case temperature – Storage		−40°C to +85°C +90°C max. −55°C to +105°C
Derating (convection cooling	g)		2.9 %/K above 65°C
Humidity (non condensing)			95 % rel. H max.
Reliability, calculated MTBF	(MIL-HDBK-217F at +25°C, grou	nd benign)	>1 Mio h
Isolation voltage (60 sec.)	– Input/Output		1′500 VDC
Isolation capacitance	– Input/Output		500 pF max.
Isolation resistance	– Input/Output (500 VDC)		>1′000 M Ohm
Switching frequency			100 to 650 kHz (PFM)
Remote On/Off control	– On: – Off: – Off stand by input current		<0.6 VDC or open circuit 2.9 to 15 VDC 1 mA typ / 3 mA max.
Environmental compliance	– Reach – RoHS		www.tracopower.com/info/reach-declaration.pdf RoHS directive 2011/65/EU

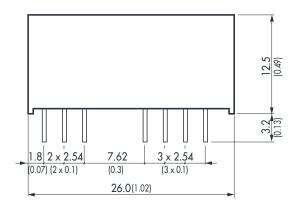
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.



Physical Specifications	
Casing material	non-conductive plastic
Potting material	epoxy (UL 94V-0 rated)
Weight	6.5 g (0.23 oz)
Soldering temperature	max. 260°C / 10 sec.

Supporting documents: www.tracopower.com/overview/tmr2wi

Outline Dimensions



1	2	Bottom	view 6	7	8	9	2.75 (0.012) (0.11) 9.3 (0.36)
				0.5	(0.02)		Ť.

Pin-Out					
Pin	Single	Dual			
1	–Vin (GND)	–Vin (GND)			
2	+Vin (Vcc)	+Vin (Vcc)			
3	Remote On/Off	Remote On/Off			
6	+Vout	+Vout			
7	ntc	Common			
8	ntc	ntc			
9	-Vout	-Vout			

(ntc = not to connect)

Dimensions in [mm], () = Inch Pin diameter \emptyset 0.5 ±0.05 (0.02 ±0.002) Tolerances ±0.5 (±0.02) Pin pitch tolerances ±0.2 (±0.008)

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

