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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TRACO POWER

DC/DC Converters

THD 10WIN Series, 10 Watt

Features

◆ Ultra wide 4:1 input voltage range

◆ Internal EMI-filter meets EN 55022,
   class A without external components

◆ High efficiency up to 87%

◆ Operating temperature range
   –40°C to +85°C

◆ No minimum load required

◆ I/O isolation 1'500 VDC

◆ Overload protection

◆ 3-year product warranty

The THD 10WIN series is designed for an optimized cost/performance ratio of DC/DC converters with output power of 10 Watt.

They come with an internal EMI-filter to meet EN55022, class A without external components. General features like no minimum load requirement, overload protection and high efficiency make these converters easy to design in. With the popular DIP-24 standard package they are also a drop in replacement for many cost critical applications.

Models

Order code	Input voltage range	Output voltage	Output current max.	Efficiency typ.
THD 10-2410WIN		3.3 VDC	2700 mA	86 %
THD 10-2411WIN		5.1 VDC	2000 mA	85 %
THD 10-2412WIN	**9 – 36 VDC**	12 VDC	833 mA	87 %
THD 10-2413WIN	(24 VDC nominal)	15 VDC	666 mA	87 %
THD 10-2415WIN		24 VDC	416 mA	87 %
THD 10-2422WIN		±12 VDC	±416 mA	87 %
THD 10-2423WIN		±15 VDC	±333 mA	87 %
THD 10-4810WIN		3.3 VDC	2700 mA	86 %
THD 10-4811WIN		5.1 VDC	2000 mA	85 %
THD 10-4812WIN	**18 – 75 VDC**	12 VDC	833 mA	87 %
THD 10-4813WIN	(48 VDC nominal)	15 VDC	666 mA	87 %
THD 10-4815WIN		24 VDC	416 mA	87 %
THD 10-4822WIN		±12 VDC	±416 mA	87 %
THD 10-4823WIN		±15 VDC	±333 mA	87 %

Input Specifications

Input current at no load	24 Vin models:	30 mA typ.
	48 Vin models:	20 mA typ.
Recommended input fuse (slow blow)	24 Vin models:	2000 mA
	48 Vin models:	1000 mA
Start-up voltage / under voltage shut down	24 Vin models:	9 VDC / 8.5 VDC (or lower)
	48 Vin models:	18 VDC / 17 VDC (or lower)
Surge voltage (1 sec. max.)	24 Vin models:	50 V max.
	48 Vin models:	100 V max.
Conducted noise		EN 55022 class A without external components
ESD (electrostatic discharge)		EN 61000-4-2, air ±8 kV, contact ±6 kV, perf. criteria A
Radiated immunity		EN 61000-4-3, 10 V/m, perf. criteria A
Fast transient / surge		EN 61000-4-4, ±2 kV, perf. criteria A EN 61000-4-5, ±1 kV perf. criteria A with external capacitor chemi-con KY 220 µF, 100 V
Conducted immunity		EN 61000-4-6, 10 Vrms, perf. criteria A

Output Specifications

Voltage set accuracy		±2 % max.
Regulation	– Input variation Vin min. to Vin max.	1.0 % max.
	– Load variation 0 – 100 % single output models:	1.2 % max.
	dual output models balanced load:	2.0 % max.
Minimum load		not required
Temperature coefficient		±0.02 %/K
Ripple and noise (20 MHz Bandwidth)		100 mVp-p max.
Transient recovery time (25% load step change)		300 µS response time typ.
Transient response deviation (25% load step change)		±5 % max.
Current limitation		110–150 % of Iout hiccup, automatic recovery
Short circuit protection		hiccup, automatic recovery
Over load protection		150 % of Iout max. typ.
Capacitive load	3.3 & 5.1 VDC models:	1000 µF max.
	12 VDC models:	470 µF max.
	15 VDC models:	330 µF max.
	24 VDC models:	150 µF max.
	±12 VDC models:	220 µF max. (each output)
	±15 VDC models:	150 µF max. (each output)

General Specifications

Temperature ranges	– Operating (natural convection 20 LFM)	–40°C to +85°C
	– Case temperature	+105°C max.
	– Storage	–50°C to +125°C
Derating		3.3 %/K above +70°C
Humidity (non condensing)		95 % rel H max.
Reliability, calculated MTBF (MIL-HDBK-217F, at +25°C, ground benign)		1'000'000 h
Isolation voltage (input/output 60 sec., rated)		1'500 VDC
Isolation capacitance (input/output, 100 KHz, 1 V)		1'000 pF typ.
Isolation resistance (input/output, 500 VDC)		>1'000 M Ohm

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

General Specifications

Remote On/Off	– On: – Off: – Off idle current:	3.5 ... 12 VDC or open circuit 0 ... +1.2 VDC or short circuit pin 1 and pin 2 10 mA max.
Switching frequency		330 kHz typ.
Safety standards		UL/cUL 60950-1, IEC/EN 60950-1
Safety approvals	– CSA certificate of compliance – CB test certificate – Certification documents	CAN/CSA-C22.2 No 60950-1-07, Am 1:2011 ANSI/UL Std No 60950-1, 2nd Ed, AM 1:2011 IEC 60950-1:2005 2nd Ed, Am 1:2009 www.tracopower.com/overview/thd10win
Environmental compliance	– Reach – RoHS	www.tracopower.com/products/reach-declaration.pdf RoHS directive 2011/65/EU

Physical Specifications

Casing	metal with non conductive baseplate
Pin	copper alloy with gold plated nickel subplate
Weight	17.3 g (0.61 oz)
Soldering temperature (1.5mm from case for 10 sec.)	max. 260°C

Outline Dimensions
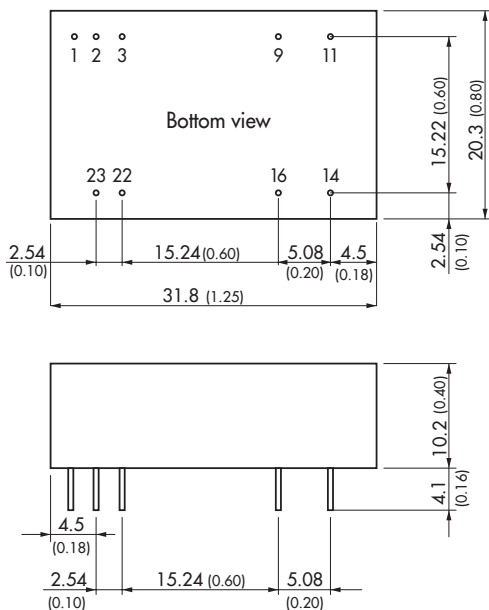
Pin-Out		
Pin	**Single**	**Dual**
1	Remote On/Off	Remote On/Off
2	–Vin (GND)	–Vin (GND)
3	–Vin (GND	–Vin (GND
9	No pin	Common
11	No function	–Vout
14	+Vout	+Vout
16	–Vout	Common
22	+Vin (Vcc)	+Vin (Vcc)
23	+Vin (Vcc)	+Vin (Vcc)

Dimensions in [mm], () = Inch
Pin diameter ø 0.5 ±0.05 (0.02 ±0.002)
Tolerances ±0.5 (±0.02)
Pin pitch tolerances ±0.25 (±0.01)