



Features

- ◆ Smallest encapsulated 15W Converter!
Ultra compact size: 1.0" x 1.0" x 0.4"
- ◆ Shielded metal case with isolated baseplate
- ◆ Wide 2:1 input ranges
- ◆ Output voltage Trim
- ◆ I/O isolation voltage 1500 VDC
- ◆ Very high efficiency up to 88%
- ◆ Operating temp. range : -40°C to +85°C
- ◆ Remote On/Off control
- ◆ Industry standard pinout
- ◆ 3-year product warranty

The THN-15 series is the latest generation of high performance dc-dc converter modules setting new standards concerning power density. This product with 15W comes in a encapsulated, shielded metal package with dimensions of only 1.0"x1.0"x 0.4" and occupies 50%(!) less board space. All models have wide 2:1 input voltage range and precisely regulated, isolated output voltages. Advanced circuit design provides high efficiency up to 88% which allows a operating temperature range of -40°C to +85°C (with derating) Further features include remote On/Off and trimmable output. Typical applications for these converters are mobile equipment, instrumentation, distributed power architectures in communication and industrial electronics and everywhere where space on PCB is critical.

Models

Order code	Input voltage range	Output voltage	Output current max.	Efficiency typ.
THN 15-1210	9 – 18 VDC (12 VDC nominal)	3.3 VDC	4'000 mA	84 %
THN 15-1211		5.0 VDC	3'000 mA	86 %
THN 15-1212		12 VDC	1'300 mA	85 %
THN 15-1213		15 VDC	1'000 mA	87 %
THN 15-1221		±5 VDC	±1'500 mA	85 %
THN 15-1222		±12 VDC	±625 mA	87 %
THN 15-1223		±15 VDC	±500 mA	88 %
THN 15-2410	18 – 36 VDC (24 VDC nominal)	3.3 VDC	4'000 mA	86 %
THN 15-2411		5.0 VDC	3'000 mA	86 %
THN 15-2412		12 VDC	1'300 mA	87 %
THN 15-2413		15 VDC	1'000 mA	88 %
THN 15-2421		±5 VDC	±1'500 mA	85 %
THN 15-2422		±12 VDC	±625 mA	88 %
THN 15-2423		±15 VDC	±500 mA	88 %
THN 15-4810	36 – 75 VDC (48 VDC nominal)	3.3 VDC	4'000 mA	86 %
THN 15-4811		5.0 VDC	3'000 mA	88 %
THN 15-4812		12 VDC	1'300 mA	88 %
THN 15-4813		15 VDC	1'000 mA	88 %
THN 15-4821		±5 VDC	±1'500 mA	85 %
THN 15-4822		±12 VDC	±625 mA	89 %
THN 15-4823		±15 VDC	±500 mA	88 %

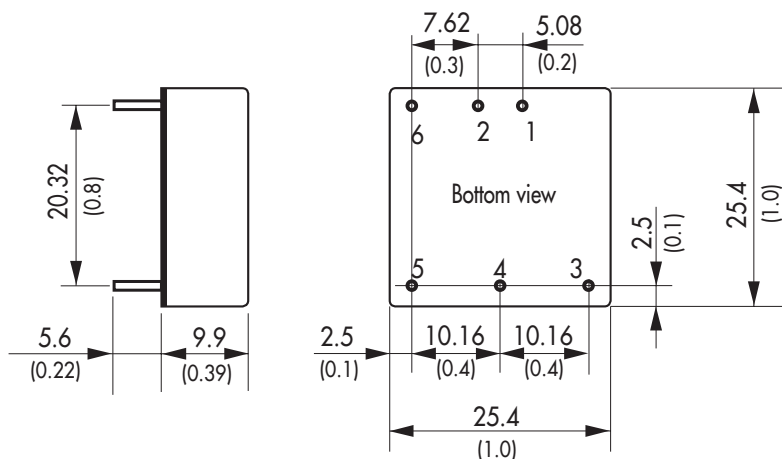
General Specifications

Temperature ranges	- Operating - Case temperature - Storage	-40°C to +85°C (with derating) +105°C max. -55°C to +125°C
Power derating		2.8 %/K above 70°C
Thermal inpedance	- Natural convection	18.2°C/W
Humidity (non condensing)		5 % to 95 % rel H max.
Reliability, calculated MTBF (MIL-HDBK-217F, @ +25°C, ground benign)		>560'000 h
Isolation voltage (60sec)	- Input/Output	1'500 VDC
Isolation capacity	- Input/Output	1000 pF typ.
Isolation resistance	- Input/Output (500 VDC)	>1'000 MOhm
Remote On/Off	- On: - Off: - Off idle current:	3.0 ... 15 VDC or open circuit 0 ... 1.2 VDC or short circuit pin 6 and pin 2 2.5 mA
Switching frequency (fixed)		400 kHz typ. (pulse width modulation PWM)
Vibration and thermal shock		MIL-STD-810E
Safety standards		UL /cUL 60950-1, EN 60950-1, IEC 60950-1
Safety approvals	- UL/cUL	www.ul.com -> certifications -> File E188913

Physical Specifications

Casing material		nickel coated copper
Baseplate		non conductive FR4
Potting material		epoxy (UL 94V-0 rated)
Weight		15 g (0.53 oz)
Soldering temperature		max. 265°C / 10sec.

Outline Dimensions



Pin-Out

Pin	Single	Dual
1	+Vin (Vcc)	+Vin (Vcc)
2	-Vin (GND)	-Vin (GND)
3	+ Vout	+ Vout
4	Trim	Common
5	-Vout	-Vout
6	Remote On/Off	

Dimensions in [mm], () = Inch
 Pin diameter \varnothing 1.0 (0.04)
 Pin pitch tolerances: ± 0.35 (± 0.014)
 Tolerances: ± 0.5 (± 0.02)

Specifications can be changed any time without notice