OWT SERIES - TRIPLE OUTPUT, 25 WATT

DESCRIPTION

OWT triple output DC/DC converters provide up to 25 Watts of output power in an industry standard 2" x 2" package. OWT units feature excellent efficiency, five-sided shielding, and fixed switching frequency. With 85°C case operation, the OWT is especially suited to telecom, networking, and industrial applications.

FEATURES

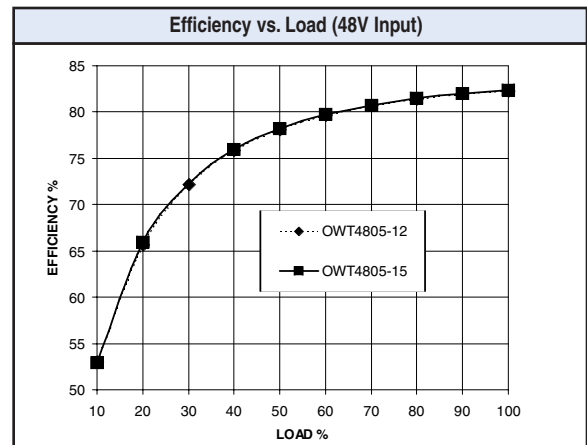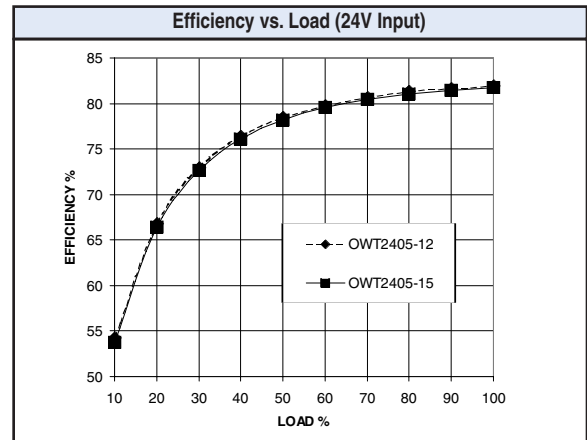- Industry Standard Package
- 12V Input
- 25W Output
- External Enable Pin
- 5-Sided Shielding
- 500V Isolation
- 85°C Case Operation

TECHNICAL SPECIFICATIONS

Input	
Voltage Range	
12 VDC Nominal	10 - 20 VDC
24 VDC Nominal	18 - 36 VDC
48 VDC Nominal	20 - 60 (add -S1 to p/n) or 36 - 72 VDC
Input Ripple Current	20% Iin Max.
Reverse Input Current	100% Iin Max.

Output	
Setpoint Accuracy, V_{out1} / V_{out2} / V_{out3}	±1%, ±5%, ± 5%
Line regulation V_{in} Min. - V_{in} Max., I_{out} Rated	±1% V_{out}
Load regulation I_{out} Min.- I_{out} Max., V_{in} Nom., V_{out1} / V_{out2} / V_{out3}	±1%, ±5%, ± 5%
Minimum Output Current	25 %
Dynamic Regulation, Loadstep	25% I_{out}
Pk Deviation	4% V_{out}
Settling Time	500 µs
Voltage Trim Range	±10%
Short Circuit / Overcurrent Protection	Continuous
Current Limit Threshold Range, % of I_{out} Rated	130%

Notes
[1] Industrial temp range of -40 to +85C available, add suffix -I to P/N
[†] MTBF predictions may vary slightly from model to model.
Specifications typically at 25°C, normal line, and full load, unless otherwise stated.
Soldering Conditions: I/O pins, 260°C, ten seconds; fully compatible with commercial wave-soldering equipment.
Safety: Agency approvals may vary from model to model. Please consult factory for specific model information.

Efficiency vs. Load (24V Input)

- OWT2405-12
- OWT2405-15

Efficiency vs. Load (48V Input)

- OWT4805-12
- OWT4805-15

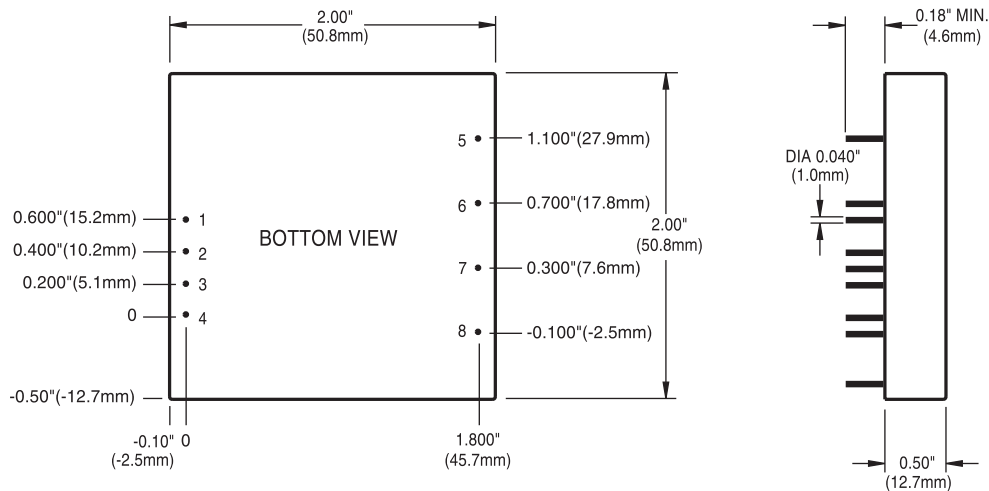| General	
Remote Shutdown	Positive
Remote Shutdown Reference	V_{in} Negative
Switching Frequency	300 kHz
Isolation	
Input - Output	500 VDC
Input - Case	500 VDC
Output - Case	500 VDC
Temperature Coefficient	0.02%/°C
Case Temperature	
Operating Range	-25 to +60°C[1]
Storage Range	-40 to +125°C
Humidity Max., Non-Condensing	95%
Vibration, 3 Axes, 5 Min Each	5 g, 10 -55 Hz
MTBF[†] (Bellcore TR-NWT-000332)	1.8×10^6 hrs
Safety	UL 1950, CSA 22.2-950, EN60950

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MODELS - (See the last page of this file for options.)

MODEL	INPUT VOLTAGE (VOLTS)	INPUT VOLTAGE RANGE (VOLTS)	MAXIMUM INPUT CURRENT (AMPS)*	OUTPUT VOLTAGE (VOLTS)	RATED OUTPUT CURRENT (AMPS)	RIPPLE & NOISE pk-pk (mV)	TYPICAL EFFICIENCY**
OWT1205-12	12	10-20	3.7	5, ±12	3.5, ±0.31	50, 120	78%
OWT2405-12	24	18-36	2.4	5, ±12	3.5, ±0.31	50, 120	81%
OWT2405-15	24	18-36	2.4	5, ±15	3.5, ±0.25	50, 150	82%
OWT4805-12S1	48	20-60	2.3	5, ±12	3.5, ±0.31	50, 120	81%
OWT4805-12	48 WIDE	36-72	1.4	5, ±12	3.5, ±0.31	50, 120	81%
OWT4805-15	48 WIDE	36-72	1.4	5, ±15	3.5, ±0.25	50, 150	82%

NOTES: *   Maximum input current at minimum input voltage, maximum rated output power.
                 ** At nominal V_{in}, rated output.

MECHANICAL DRAWING

Thermal Impedance	
Natural Convection	14.9 °C/W
100 LFM	11.3 °C/W
200 LFM	8.3 °C/W
300 LFM	6.8 °C/W
400 LFM	5.4 °C/W

Note:
Thermal impedance data is dependent on many environmental factors. The exact thermal performance should be validated for specific application.

Pin	Function
1	+V_{in}
2	-V_{in}
3	No Conn.
4	Enable
5	+ Aux Out
6	+5V Out
7	Common
8	- Aux Out

Tolerances	
Inches:	(Millimeters)
.XX ± 0.040	.X ± 1.0
.XXX ± 0.010	.XX ± 0.25
Pin:	
± 0.002	± 0.05

(Dimensions as listed unless otherwise specified.)

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OPTIONS

When ordering equipment options, use the following suffix information. Select the option(s) that you prefer and add them to the model number. Example ordering options are located below the options table.

OPTION	SUFFIX	APPLICABLE SERIES	REMARKS
Negative Logic	N	HAS, HBD, HBS, HES, HLS, HLD, LES, QBS, QES, QLS, TES, TQD	TTL "Low" Turns Module ON TTL "High" Turns Module OFF
Lucent-Compatible Trim	T	HAS, HBD, HBS, HES, HLS, QBS, QES, QLS	
Terminal Strip	TS	XWS, XWD, XWT	
Trim	1	IAS, LES	
Enable	2	IAD, IAS, LES, SMS	
Trim and Enable	3	IAS, LES	
Pin Length and Heatsink Options			Standard Pin Length is 0.180" (4.6mm)
0.110" (2.8mm) Pin Length	8	All Leaded Models	
0.150" (3.8mm) Pin Length	9	All Leaded Models	
0.24" (6.1mm) Horizontal Heatsink	1H	All 1/4-Bricks, 1/2-Bricks, 3/4-Bricks, Full-Bricks (Except HLS, HLD, QLS, TLD, and TKD Packages)	Includes Thermal Pad
0.24" (6.1mm) Vertical Heatsink	1V	All 1/4-Bricks, 1/2-Bricks, 3/4-Bricks, Full-Bricks (Except HLS, HLD, QLS, TLD, and TKD Packages)	Includes Thermal Pad
0.45" (11.4mm) Horizontal Heatsink	2H	All 1/4-Bricks, 1/2-Bricks, 3/4-Bricks, Full-Bricks (Except HLS, HLD, QLS, TLD, and TKD Packages)	Includes Thermal Pad
0.45" (11.4mm) Vertical Heatsink	2V	All 1/4-Bricks, 1/2-Bricks, 3/4-Bricks, Full-Bricks (Except HLS, HLD, QLS, TLD, and TKD Packages)	Includes Thermal Pad
0.95" (24.1mm) Horizontal Heatsink	3H	All 1/4-Bricks, 1/2-Bricks, 3/4-Bricks, Full-Bricks (Except HLS, HLD, QLS, TLD, and TKD Packages)	Includes Thermal Pad
0.95" (24.1mm) Vertical Heatsink	3V	All 1/4-Bricks, 1/2-Bricks, 3/4-Bricks, Full-Bricks (Except HLS, HLD, QLS, TLD, and TKD Packages)	Includes Thermal Pad

Example Options:
       HBS050ZG-ANT3V = HBS050ZG-A with negative logic, Lucent-compatible trim, and 0.95" vertical heatsink.
       LES015YJ-3N = LES015YJ with optional trim and enable, negative logic.
       QBS066ZG-AT8 = QBS066ZG-A with Lucent-compatible trim and 0.110" pin length.

NUCLEAR AND MEDICAL APPLICATIONS - Power-One products are not authorized for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems without the express written consent of the respective divisional President of Power-One, Inc.

TECHNICAL REVISIONS - The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.