

XWD SERIES - DUAL OUTPUT, 180 WATT

DESCRIPTION

XWD dual output, DC to DC converters are high powered converters that cover a wide range of applications. Available input voltages include 12V, 24V, 40V, and 48V. Output voltages are available from 5V to 15V. The XWD features remote sense leads for accurate point of load regulation, and has short circuit and overcurrent protection. For single and triple output high power solutions, see the XWS and XWT series of converters.



FEATURES

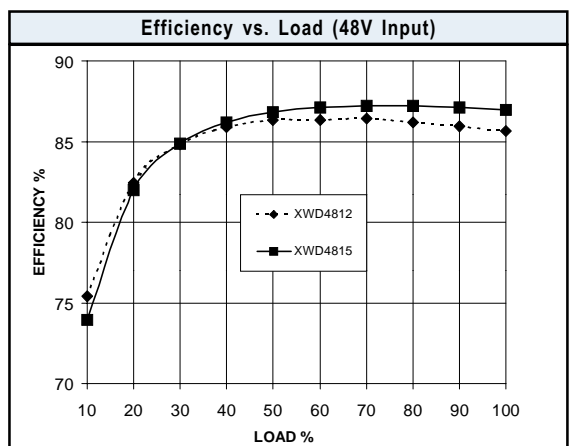
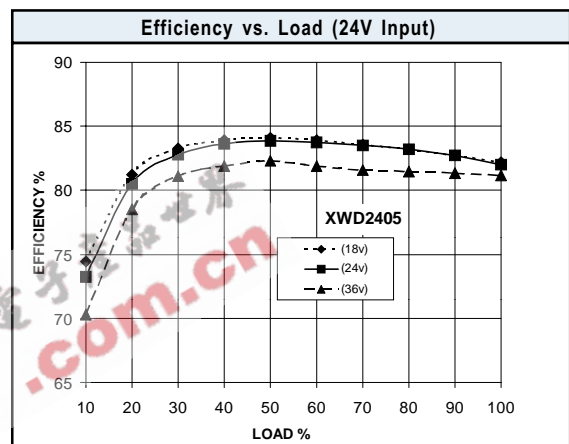
- High Power Package
- Wide Input Range
- Trim and Enable
- Remote Sense Pins
- 500V Isolation
- Short Circuit Protection

TECHNICAL SPECIFICATIONS

Input	
Voltage Range	10 - 20 VDC
12 VDC Nominal	18 - 36 VDC
24 VDC Nominal	36 - 72 VDC
48 VDC Nominal	20 - 60 VDC
40 VDC Nominal (Wide Input)	20% I_{in} Max.
Input Ripple Current	100% I_{in} Max.
Reverse Input Current	

Output	
Setpoint Accuracy	±1%
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.	±1% V_{out}
Minimum Output Current	10 %
Dynamic Regulation, Loadstep	25% I_{out}
Pk Deviation	4% V_{out}
Settling Time	500 μ S
Voltage Trim Range	±10%
Current Limit Threshold Range, % of I_{out} Rated	110 - 130%

General	
Turn-On Time	10 ms
Remote Shutdown	Positive Logic
Switching Frequency	200 kHz
Isolation	
Input - Output	500 VDC
Temperature Coefficient	±0.02%/°C
Case Temperature	
Operating Range	-25 To +85°C††
Storage Range	-40 To +125°C
Thermal Shutdown Range	105 - 115°C
Humidity Max., Non-Condensing	95%
Vibration, 3 Axes, 5 Min Each	5 g, 10 - 55 Hz
MTBF† (Bellcore TR-NWT-000332)	Consult Factory
Safety	Consult Factory
Weight (Approx.)	15.4 oz



Notes
† MTBF predictions may vary slightly from model to model.
†† Industrial temp range of -40 to +85°C available.
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.

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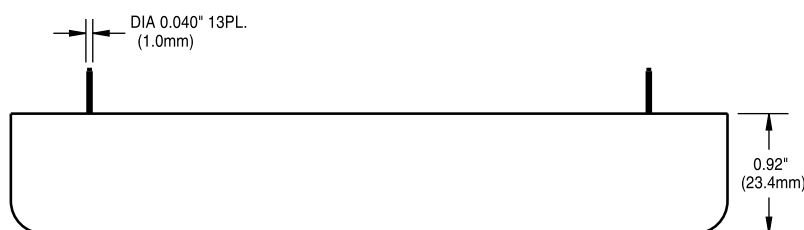
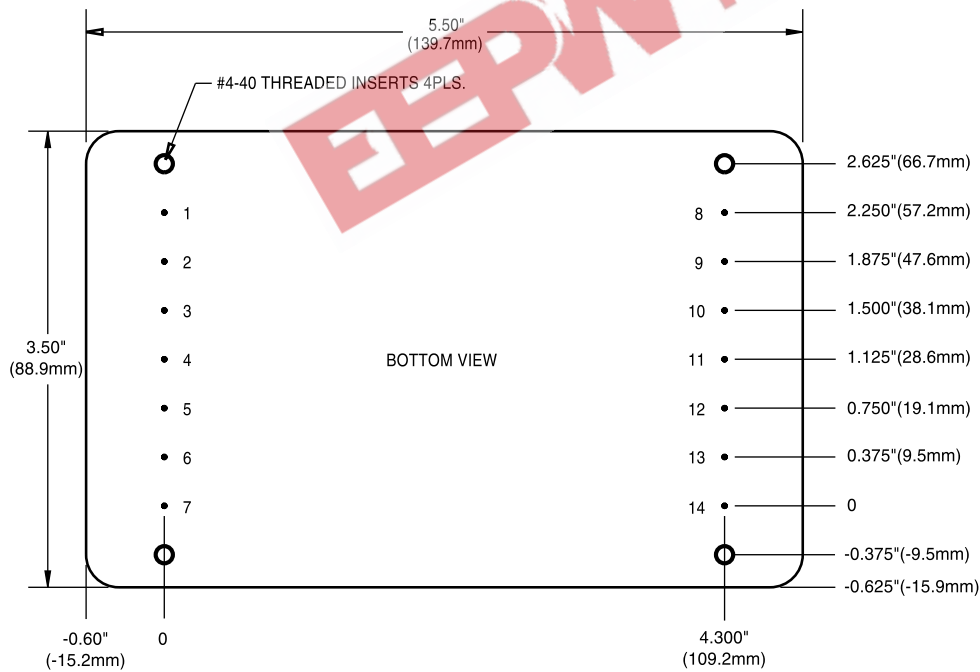
MODELS - (See the last page of Section C for options.)

Vin (Volts)	Vin Range (Volts)	Iin Max* (Amps)	Vout (Volts)	Iout Rated (Amps)	Ripple & Noise Pk-Pk (mV)	Efficiency Typ. **	Model
12	10 - 20	14.0	± 5	± 10	50	79%	XWD1205
12	10 - 20	16.9	± 12	± 5.2	120	81%	XWD1212
12	10 - 20	16.7	± 15	± 4.15	150	82%	XWD1215
24	18 - 36	11.3	± 5	± 15	50	82%	XWD2405
24	18 - 36	13.3	± 12	± 7.5	120	83%	XWD2412
24	18 - 36	13.3	± 15	± 6	150	83%	XWD2415
48	36 - 72	5.5	± 5	± 15	50	84%	XWD4805
48	36 - 72	6.5	± 12	± 7.5	120	85%	XWD4812
48	36 - 72	6.5	± 15	± 6	150	85%	XWD4815
40	20 - 60	10.3	± 5	± 15	50	80%	XWD6005
40	20 - 60	12.2	± 12	± 7.5	120	81%	XWD6012
40	20 - 60	12.2	± 15	± 6	150	81%	XWD6015

* Maximum input current at minimum input voltage, maximum rated output power.

** At nominal Vin, rated output.

MECHANICAL DRAWING



Thermal Impedance	
Natural convection	2.5 °C/W
100 LFM	2.1 °C/W
200 LFM	1.7 °C/W
300 LFM	1.3 °C/W
400 LFM	1.1 °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	No Pin
2	-V _{in}
3	-V _{in}
4	+V _{in}
5	+V _{in}
6	Enable
7	Case
8	-V1 Sense
9	-V1 _{out}
10	+V1 _{out}
11	+V1 Sense1
12	- V2 _{out}
13	Trim
14	+ V2 _{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.)

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, LES, QBS, QES, TES, TQD	TTL "Low" Turns Module ON TTL "High" Turns Module OFF
Lucent Compatible Trim	T	HAS, HBD, HBS, HES, QBS, QES	
Terminal Strip	TS	XWS, XWD, XWT	
Trim	1	IAS, LES	
Enable	2	IAD, IAS, LES, SMS	
Trim and Enable	3	IAS, LES	
Current Share	4	SMS	
Headerless	Y	Encapsulated EWS, IWS, OWS	
PIN LENGTH AND HEATSINK OPTIONS			Standard Pin Length is 0.180" (4.6mm)
0.110" (2.8mm) Pin Length	8	All Units (Except SMS)	
0.150" (3.8mm) Pin Length	9	All Units (Except SMS)	
0.24" (6.1mm) Horizontal Heatsink	1H	All Units (Except DIP, SIP, and SM Packages)	Includes Thermal Pad
0.24" (6.1mm) Vertical Heatsink	1V	All Units (Except DIP, SIP, and SM Packages)	Includes Thermal Pad
0.45" (11.4mm) Horizontal Heatsink	2H	All Units (Except DIP, SIP, and SM Packages)	Includes Thermal Pad
0.45" (11.4mm) Vertical Heatsink	2V	All Units (Except DIP, SIP, and SM Packages)	Includes Thermal Pad
0.95" (24.1mm) Horizontal Heatsink	3H	All Units (Except DIP, SIP, and SM Packages)	Includes Thermal Pad
0.95" (24.1mm) Vertical Heatsink	3V	All Units (Except DIP, SIP, and SM 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 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.