EWD SERIES - DUAL OUTPUT, 5 WATT

DESCRIPTION

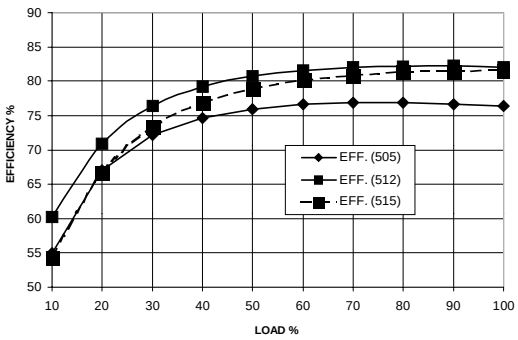
EWD dual output DC/DC converters offer excellent regulation and isolation in an industry standard package. Available in several input versions, the EWD is perfect for industrial, datacom, or telecom applications. The EWD features short circuit protection, six-sided shielding, and 500 VDC isolation. Please see the EWS series for single output applications.



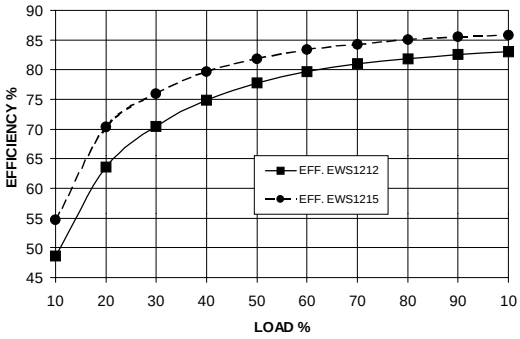
FEATURES

- Industry Standard Package
- Industry Standard Pinout
- 85°C Case Operation
- Short Circuit Protection
- 5V and 12V Inputs
- Input Pi Filter
- 6-Sided Shielding
- Regulated Outputs
- 500V Isolation

Efficiency vs. Load (5V Input)



Efficiency vs. Load (12V Input)



TECHNICAL SPECIFICATIONS

Input	
Voltage Range	
5V DC Nominal	4.5 - 9 VDC
12 VDC Nominal	9 - 18 VDC
Reflected Ripple	20% I_{in} Max.
Reverse Input Current	100% I_{in} Max.

Output	
Setpoint Accuracy	±1%
Line Regulation V_{in} Min. - V_{in} Max., I_{out} Rated	±1.0% V_{out}
Load Regulation I_{out} Min. - I_{out} Max., V_{in} Nom.	±1.0% V_{out}
Minimum Output Current	10 % I_{out} Rated
Dynamic Regulation, Loadstep	25% I_{out}
Pk Deviation	1% V_{out}
Settling Time	500 µs
Temperature Coefficient	0.02%/°C
Ripple and Noise, 20 MHz BW	1% V_{out} Nom.
Short Circuit Protection [1]	Hiccup
Current Limit	130%

General	
Switching Frequency	200 kHz
Isolation	
Input - Output	500 VDC
Isolation Resistance - Input to Output	10^9 Ohms
Standard Case Operating Range	-25 To +85°C
Storage Range	-40 To +125°C
Humidity Max., Non-Condensing	95%
Vibration, 3 Axes, 5 Min. each	5 g, 10 - 55 Hz
Safety	UL, CUL, TUV
Weight (Approx.)	1.4 oz

Notes

[1] Converter will auto-restart once fault has been removed.

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.

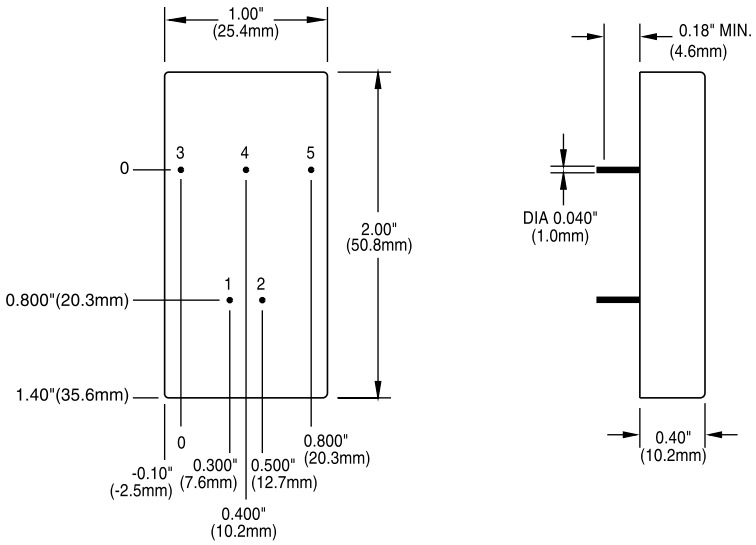
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MODELS - (See the last page of this file for options.)

Vin (Volts)	Vin Range (Volts)	Iin Max.* (Amps)	Vout (Volts)	Iout Rated (Amps)	Ripple & Noise Pk-Pk (mV)	Efficiency Typ. **	Model
5	4.5 - 9	1.64	±5	±0.50	50	72%	EWD505
5	4.5 - 9	1.85	±12	±0.25	120	81%	EWD512
5	4.5 - 9	1.85	±15	±0.20	150	81%	EWD515
12	9 - 18	0.69	±5	±0.50	50	80%	EWD1205
12	9 - 18	0.75	±12	±0.25	120	82%	EWD1212
12	9 - 18	0.73	±15	±0.20	150	83%	EWD1215

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

MECHANICAL DRAWING



BOTTOM VIEW

Thermal Impedance	
Natural Convection	15.4 °C/W
100 LFM	12.2 °C/W
200 LFM	9.3 °C/W
300 LFM	7.4 °C/W
400 LFM	6.4 °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	$+ V_{out}$
4	Common
5	$- V_{out}$

Tolerances	
Inches:	(Millimeters)
.XX ± 0.040	.X ± 1.0
.XXX ± 0.010	.XX ± 0.25
Pin:	
± 0.002	± 0.05
Case:	
+ 0.04, - 0.00	+ 1.0, - 0.0

(Tolerances 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.