IWD DC-DC Series Data Sheet
Dual-Output, 10 Watts

RoHS Compliant

Features

- RoHS lead-solder-exemption compliant
- Industry-standard package
- Industry-standard pinout
- 85°C case operation
- Short-circuit protection
- 5V and 12V inputs
- Input Pi filter
- 6-sided shielding
- Wide input voltage
- 500V isolation

Description

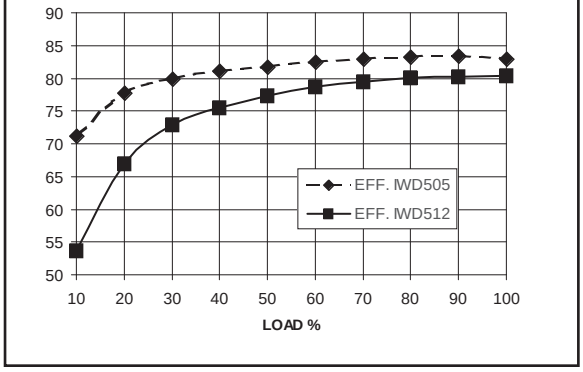
IWD dual-output DC-DC converters offer excellent regulation and isolation in an industry-standard package. Available in 5V and 12V input versions, the IWD is perfect for industrial, datacom, or telecom applications. The IWD features short-circuit protection and 500 VDC isolation. Please see the IWS and IAS Series for single-output applications.

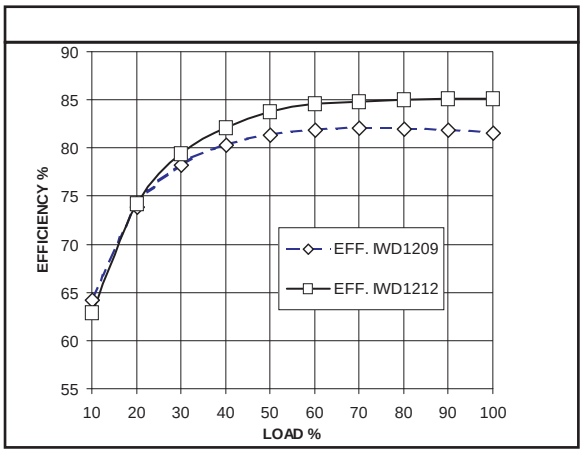
Technical Specifications

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

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%

Switching Frequency	300 kHz
Isolation	
Input - Output	500 VDC
Isolation Resistance - Input to Output	10^9 Ohms
Standard Case Operating Range	-25 to +85°C
Industrial Range (add -I to p/n)	-40 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





[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.

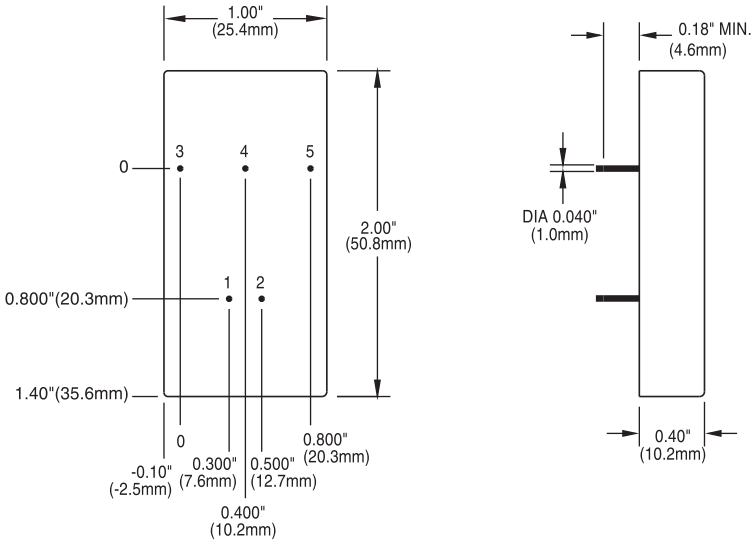
Model Selection

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**
IWD505	5	4.65 - 5.50	3.20	±5	±1.000	50	82%
IWD512	5	4.65 - 5.50	3.20	±12	±0.500	120	80%
IWD515	5	4.65 - 5.50	3.20	±15	±0.375	150	82%
IWD1205	12	10.90 - 13.20	1.55	±5	±1.000	50	80%
IWD1212	12	10.90 - 13.20	1.55	±12	±0.500	120	84%

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

Model numbers highlighted in yellow or shaded are not recommended for new designs.

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 ± .010	.XX ± 0.25
Pin:	
± 0.002	± 0.05
Case:	
+ 0.04, - 0.00	+ 1.0, - 0.0

(Tolerances as listed unless otherwise specified.)