



Features

- RoHS lead-solder-exemption compliant
- Industry-standard package
- Industry-standard footprint
- Fixed-frequency design
- 85 °C case operation
- Optional trim and enable
- Wide-range input
- 1500 V isolation
- Short-circuit protection

Description

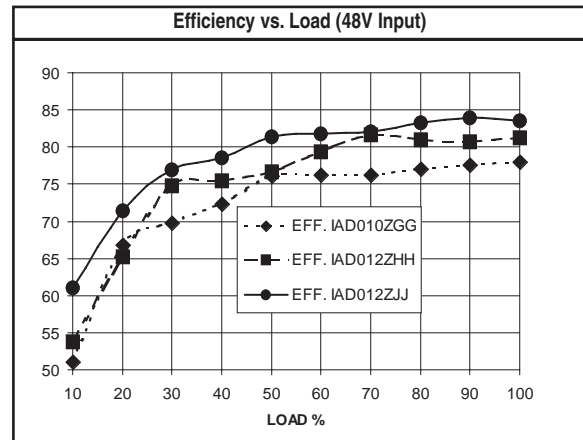
IAD dual-output dc-dc converters provide up to 12 watts of output power in an industry-standard package and footprint. With a maximum case temperature of 85 °C, the IAD is well suited for the most demanding applications. The IAD features 1500 VDC isolation, short circuit, and overtemperature protection, as well as six-sided shielding. The IAD is available with optional enable and voltage trim pins. Please see the IAS series for single-output applications.

Technical Specifications

Input	
Voltage Range	18 - 36 VDC
24 VDC Nominal	48 VDC Nominal
48 VDC Nominal	25 mA
Reflected Ripple	Shunt Diode
Input Reverse Voltage Protection	

Output	
Setpoint Accuracy	±1%
Auxillary Setpoint Accuracy	5 %
Line Regulation V_{in} Min. - V_{in} Max., I_{out} Rated	0.5% 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	4% V_{out}
Settling Time	500 μ s
Voltage Trim Range	±10%
Short Circuit / Overcurrent Protection	Hiccup
Power Limit Threshold Range	110 - 150%

General	
Turn-On Time	300 ms
Remote Shutdown	Positive Logic
Switching Frequency	400 kHz
Isolation	
Input - Output	1500 VDC
Output - Case (for 48 V_{in})	500 VDC
Input - Case (for 24 V_{in})	1050 VDC
Temperature Coefficient	±0.03%/°C
Case Temperature	
Operating Range	-40 To +85 °C
Storage Range	-40 To +110 °C
Humidity Max., Non-Condensing	95%
Vibration, 3 Axes, 5 Min Each	5 g, 10 - 55 Hz
MTBF† (Bellcore TR-NWT-000332)	1.8 X 10 ⁶ hrs
Safety	UL, cUL, VDE
Weight (Approx.)	1.2 oz



Notes
† MTBF predictions may vary slightly from model to model.
†† Industrial temp range 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.
Units are water-washable and fully compatible with commercial spray or immersion post wave-solder washing equipment.

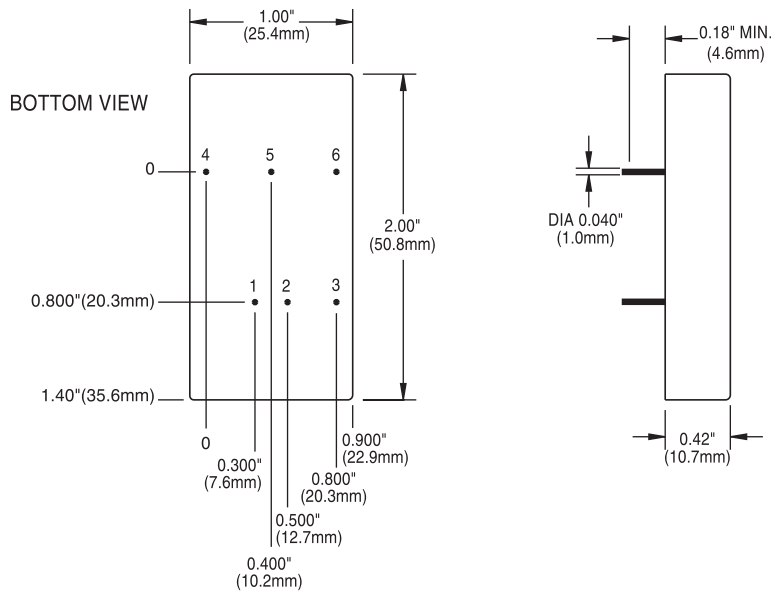
Model Selection

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**
IAD012YHH	24	18-36	0.85	±12	±0.5	120	82%
IAD012YJJ	24	18-36	0.85	±15	±0.4	150	83%
IAD010ZGG	48	34-75	0.40	±5	±1.0	75	78%
IAD012ZHH	48	34-75	0.43	±12	±0.5	120	82%
IAD012ZJJ	48	34-75	0.42	±15	±0.4	150	83%

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



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	Optional Shutdown
4	+V _{out}
5	Common
6	-V _{out}

Tolerances	
Inches:	(Millimeters)
.XX ± 0.020	.X ± 0.5
.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.)

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