

100/75/50 WATT JC/JW SERIES

FEATURES

High power density, up to 36.5 W/in³

Low output noise

Constant frequency

Industry-standard pinout

Metal base plate

2:1 input voltage range

Remote sense

Remote on/off

High efficiency typ. 88%

Output voltage adjustable (60% to 110%)

Thermal shutdown



If your application requires 100, 75, or 50 watts of power in the smallest footprint, the JC/JW Series modules are your answer. The JC/JW Series utilize an all surface-mount design on a metal board substrate, for excellent thermal coupling, to provide high reliability. The proprietary magnetic design with interleaved, planar windings is the heart of the JC/JW Series design and allows these modules to provide 37 watts per cubic inch in a small 2.4 inch x 2.28 inch x 0.5 inch package. The JC/JW Series provide precisely regulated dc voltages from an unregulated dc input source of 18 to 36 V or 36 to 72 V. The maximum operating case temperature of 100°C and high efficiency of 88% typical minimizes the need for attached heat sinks.

Special features of the JC/JW Series include remote on/off, remote sense, separate case ground pin, output voltage adjust, and constant operating frequency (500 kHz).

SELECTION CHART

Input Vdc	Output Power W	Output Vdc	Optional Features
18-36 = C	100	5 = A	1 = Remote on/off logic (negative logic)
36-72 = W	075	12 = B	
	050	15 = C	
		2 = D	
		3.3 = F	
		24 = H	

Part No. ↓ ↓ ↓ ↓

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1. Consult factory for 18-36 V input availability.

For output voltages between 1.5 V and 28 V, consult factory.

Note: Outputs less than 5 V are limited to 20 A for 100 W, 15 A for 75 W, and 10 A for 50 W.

TYPICAL OUTPUT CHARACTERISTICS

Efficiency	10	1W
3.3 V Output	78%	80%
5 V Output	82%	85%
12 V Output	85%	87%
15 V Output	85%	88%
Set Point Accuracy	$\pm 1\%$	
Load Regulation	$\pm 0.05\%$	
Line Regulation	$\pm 0.01\%$	
Output Temperature Drift	$\pm 0.01\%/^{\circ}\text{C}$	
Output Ripple		
3.3 V, 5 V Output	100 mVp-p, 40 mVrms	
12 V Output	150 mVp-p, 80 mVrms	
15 V Output	150 mVp-p, 80 mVrms	
Overvoltage Shutdown	120%	
Current Limit Inception	115%	
Short Circuit Current	130%	

TYPICAL INPUT CHARACTERISTICS

Reflected Ripple Current	20 mAp-p
Ripple Rejection @ 120 Hz	60 dB

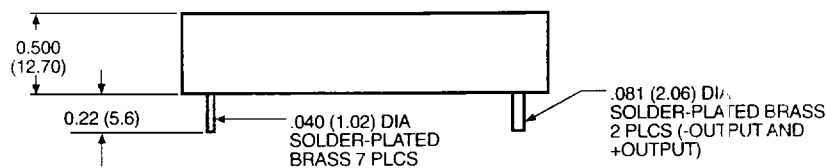
OPTIONS

Choice of on/off configuration — positive and negative logic
Heat sink available for extended operating temperature (page 58)

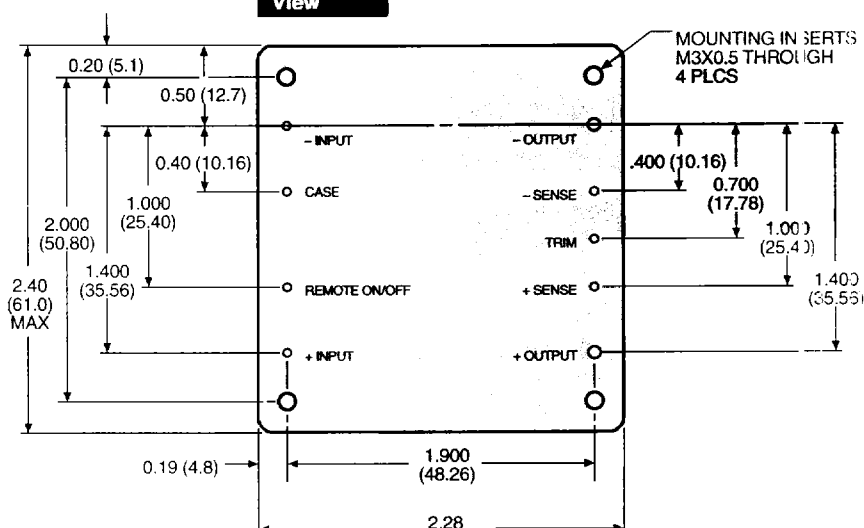
PRODUCT ATTRIBUTES

Isolation	
Voltage	500 Vdc
Capacitance	2000 pF
Resistance	>10 M Ω
Operating Case Temp.	-40° to 100°C
Storage Temperature	-40° to 110°C
Maximum Weight	3.5 oz (99 grams)
Case Dimensions	2.40" L, 2.28" W, 0.50" H

Side View



Bottom View



Pins are solder-plated brass.
Dimensions are in inches and (millimeters).

Compare to other modules in this package size

This module provides:

- Lower input and output noise
- Superior case design for grounding and mounting heat sink
- Higher power density up to 36.5 W/in³

For more specific technical information, call 1-800-523-7819.

For product-specific data sheet and application/technical notes, call 1-800-372-2447.

• **Remote On/Off** App. Note AP91-036EPS

• **Thermal Energy Management** Tech. Note TN94-013EPS