



## GENERAL FEATURES:

- Ultra miniature size
- Input/output isolated
- Short circuit protection
- Line and load regulation
- Input and output filtering
- High efficiency and reliability
- Low cost
- Custom design available

## GENERAL DESCRIPTION

JBM's model D3 DC/DC converter is a 4-pin power supply, capable of accepting inputs ranging from 5 volts to 24 volts. Outputs for this model typically range from 5 volts to 15 volts. The units are available in standard and custom configurations.

## NOTES TO SCHEMATIC

White Dot Pin #1

Leads: 0.040" Diameter Solderable Brass Alloy  
Case Material: Non-Conductive Black Plastic  
Marking: White Epoxy Ink  
Tolerance: .xx + / - 0.020"  
.xxx + / - 0.010"

## WIRING DETAILS

Single Output

| Pin # | Connection |
|-------|------------|
| 1     | - V in     |
| 2     | + V in     |
| 3     | - V out    |
| 4     | + V out    |

## ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range: -25 to +71 degrees C  
Storage Temperature Range: -55 to +130 degrees C  
Temperature Coefficient: + / - 0.05% per degree C  
Derating: None  
Cooling: Free Air Convection  
Humidity (Non-Condensing): 20% to 95% RH

## ELECTRICAL SPECIFICATIONS

Efficiency (at Full Load): Up to 75%  
Isolation Voltage: 500 VDC Min  
Isolation Resistance: 1000 M ohms  
Switching Frequency: 25 KHz Min.  
Burn-In @ Full Load: 100%/  
4 Hrs @ 50 degrees C.

## INPUT SPECIFICATIONS

Input Voltage: See Table of Values  
Input Filter: Capacitor Type

## OUTPUT SPECIFICATIONS

Output Voltage / Accuracy: See Table of Values  
Output Current: See Table of Values  
Ripple and Noise (20 MHz BW): 50 MV P-P Max.  
Line Regulation\*: 1.2% Max.  
Load Regulation\*\*: 8.0% Max.  
Voltage Stability (24 Hour): + / - 0.05% Max.  
Short Circuit Protection: 10 Seconds Max.

\* Line Regulation is per 1.0% Change in Input Voltage  
\*\* Load Regulation is for Load Change from 20% to 100%

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| UNREGULATED<br>POWER SUPPLIES<br>JBM PART NO. | INPUT<br>V <sub>dc</sub> | OUTPUT<br>V <sub>dc</sub> | OUTPUT<br>CURRENT<br>(mA) | EFFICIENCY<br>AT FULL LOAD<br>% | REGULATION<br>LINE<br>% | LOAD<br>% | O/P<br>NOISE<br>mVp-p |
|---|--------------------------|---------------------------|---------------------------|---------------------------------|-------------------------|-----------|-----------------------|
| DC01-0505-D3                                  | 5.0                      | 5.0                       | 200                       | 65                              | 1.2                     | 8.0       | 200                   |
| DC02-0509-D3                                  | 5.0                      | 9.0                       | 140                       | 75                              | 1.2                     | 8.0       | 150                   |
| DC02-0512-D3                                  | 5.0                      | 12.0                      | 100                       | 75                              | 1.2                     | 8.0       | 150                   |
| DC02-0515-D3                                  | 5.0                      | 15.0                      | 85                        | 75                              | 1.2                     | 8.0       | 120                   |
| DC01-1205-D3                                  | 12.0                     | 5.0                       | 200                       | 65                              | 1.2                     | 8.0       | 200                   |
| DC02-1209-D3                                  | 12.0                     | 9.0                       | 140                       | 75                              | 1.2                     | 8.0       | 150                   |
| DC02-1215-D3                                  | 12.0                     | 15.0                      | 85                        | 75                              | 1.2                     | 8.0       | 150                   |
| DC01-2405-D3                                  | 24.0                     | 5.0                       | 200                       | 65                              | 1.2                     | 8.0       | 200                   |
| DC02-2412-D3                                  | 24.0                     | 12.0                      | 100                       | 75                              | 1.2                     | 8.0       | 200                   |

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