

E C 4 B
S E R I E S

10 WATT DC-DC CONVERTERS



Features

- 10W Isolated Output
- 2" x 1" Case
- Regulated Outputs
- Efficiency to 82%
- Pi Input Filter
- Continuous Short Circuit Protection
- Meets EN55022 Class A, Conducted

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	SIZE
			MIN.	MAX.	NO LOAD	FULL LOAD		
EC4B01	9-18 VDC	5 VDC	100 mA	2000 mA	30 mA	1100 mA	76	2" x 1"
EC4B02		12 VDC	45 mA	830 mA	30 mA	1065 mA	78	
EC4B03		15 VDC	35 mA	666 mA	30 mA	1065 mA	78	
EC4B04		±12 VDC	±25 mA	±415 mA	40 mA	1065 mA	78	
EC4B05		±15 VDC	±20 mA	±333 mA	40 mA	1065 mA	78	
EC4B06		±5 VDC	±50 mA	±1000 mA	40 mA	1065 mA	78	
EC4B11	18-36 VDC	5 VDC	100 mA	2000 mA	20 mA	535 mA	78	2" x 1"
EC4B12		12 VDC	45 mA	830 mA	20 mA	520 mA	80	
EC4B13		15 VDC	35 mA	666 mA	20 mA	520 mA	80	
EC4B14		±12 VDC	±25 mA	±415 mA	20 mA	520 mA	80	
EC4B15		±15 VDC	±20 mA	±333 mA	20 mA	520 mA	80	
EC4B16		±5 VDC	±50 mA	±1000 mA	20 mA	520 mA	80	
EC4B21	36-72 VDC	5 VDC	100 mA	2000 mA	10 mA	260 mA	80	2" x 1"
EC4B22		12 VDC	45 mA	830 mA	10 mA	254 mA	82	
EC4B23		15 VDC	35 mA	666 mA	10 mA	254 mA	82	
EC4B24		±12 VDC	±25 mA	±415 mA	10 mA	254 mA	82	
EC4B25		±15 VDC	±20 mA	±333 mA	10 mA	254 mA	82	
EC4B26		±5 VDC	±50 mA	±1000 mA	10 mA	254 mA	82	
EC4B31	4.7-9 VDC	5 VDC	0 mA	1600 mA	15 mA	2130 mA	75	2" x 1"
EC4B32		12 VDC	0 mA	666 mA	15 mA	2100 mA	76	
EC4B33		15 VDC	0 mA	533 mA	15 mA	2100 mA	76	
EC4B34		±12 VDC	0 mA	±333 mA	15 mA	2100 mA	76	
EC4B35		±15 VDC	0 mA	±266 mA	15 mA	2100 mA	76	
EC4B36		±5 VDC	0 mA	±800 mA	15 mA	2100 mA	76	

NOTE: 1. Nominal Input Voltage 5,12, 24 or 48 VDC

Specifications

INPUT SPECIFICATIONS:

Input Voltage Range.....	.5V.....4.7-9V
12V.....	9-18V
24V.....	18-36V
48V.....	36-72V
Input Filter.....	Pi Type

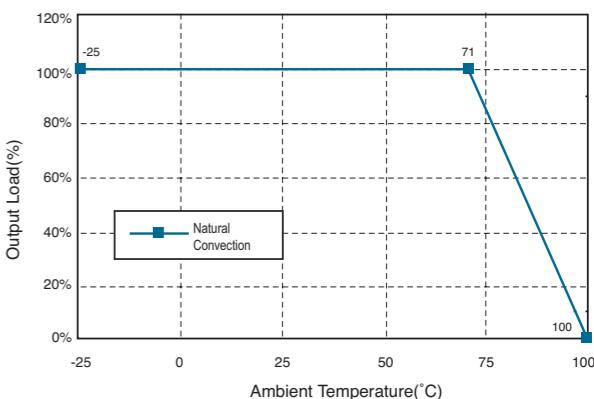
OUTPUT SPECIFICATIONS:

Voltage Accuracy	
Single Output.....	±1.0% max.
Dual + Output.....	±1.0% max.
Dual - Output.....	±1.0% max.
Voltage Balance (Dual).....	±1.0% max.
Transient Response	
Single 25% Step Load Change.....	<500µ sec.
Dual FL-1/2L ±1% Error Band.....	<500µ sec.
Ripple and Noise, 20MHzBW.....	100mV p-p max.
Temperature Coefficient.....	±0.02%/°C max.
Short Circuit Protection.....	Continuous
Line Regulation ¹ Single/Dual Output.....	±0.2% max.
Load Regulation ² Single/Dual Output.....	±1.0% max.

GENERAL SPECIFICATIONS:

Efficiency.....	See Table
Isolation Voltage.....	500 VDC min.
Isolation Resistance.....	10 ohms
Switching Frequency.....	200kHz, min.
Operating Ambient Temperature Range	-25°C to +71°C
De-rating, Above 71°C	Linearly to Zero power at 100°C
Case Temperature ⁴	100°C max
Cooling	Natural Convection
Storage Temperature Range.....	-40°C to + 100°C
EMI/RFI.....	Six sided Continuous Shield
Dimensions.....	2.00 x 1.00 x 0.40 inches (50.8 x 25.4 x 10.2 mm)
Case Material.....	Black Coated Copper with Non-Conductive Base
Weight.....	.35g

EC4B Series Derating Curve



NOTE:

1. Measured From High Line to Low Line
2. Measured From Full Load to 1/4 Load
3. A Minimum Load On the Output is Necessary to Maintain Regulation
4. Maximum case temperature under any operating condition should not exceed 100°C.

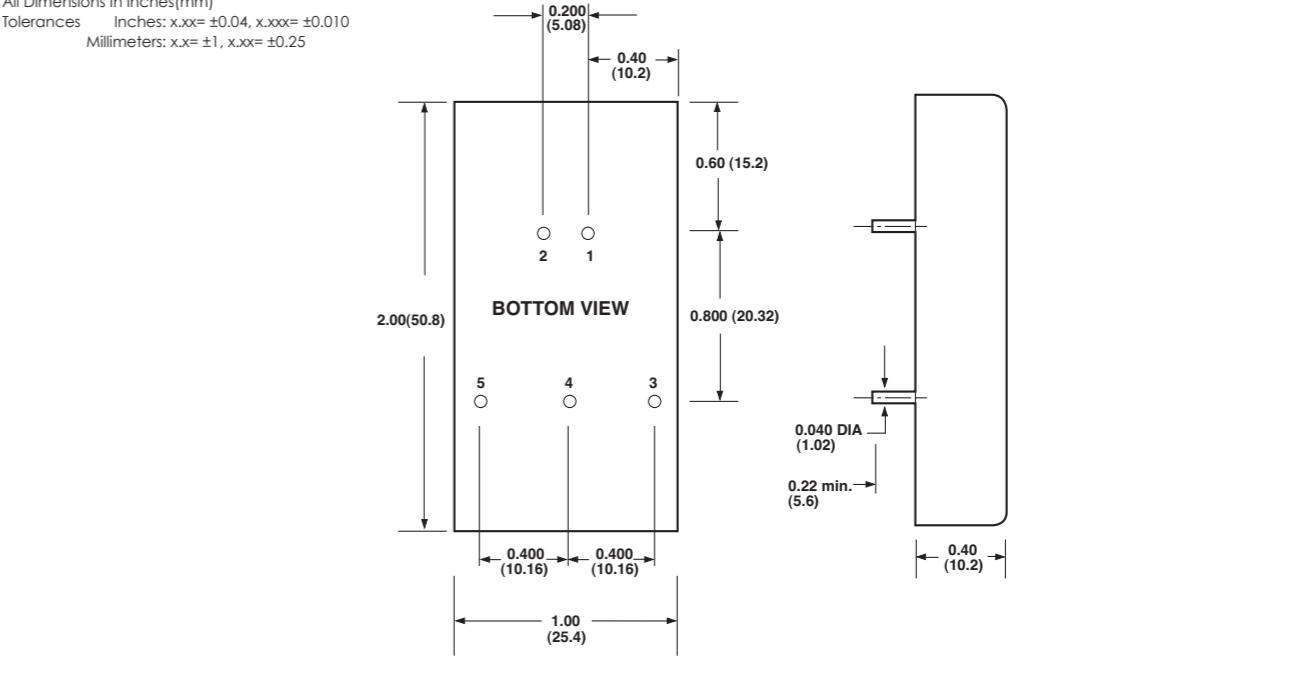
PIN CONNECTION

Pin	Function
1	+ Input
2	- Input
3	+ Output
4	Common/NP
5	- Output

NP*-NO PIN ON SINGLE OUTPUT

CASE B

All Dimensions In Inches(mm)
Tolerances Inches: x.xx= ±0.04, x.xxx= ±0.010
Millimeters: x.x= ±1, x.xx= ±0.25



All Specifications Typical At Nominal Line, Full Load and 25°C Unless Otherwise Noted.