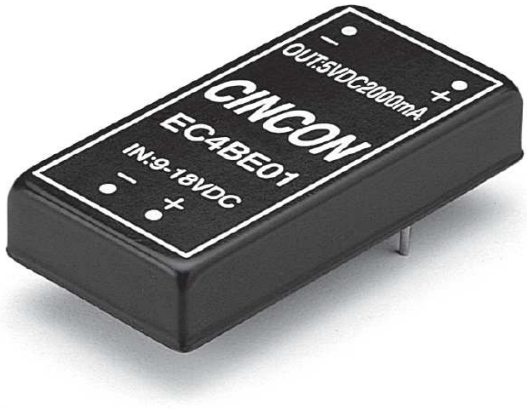
EC4BE SERIES

10 WATT 2:1 INPUT RANGE DC-DC CONVERTERS

E176177

FEATURES

* 10W Isolated Output
* 2”x1” Six-Sided Shield Metal Case
* Efficiency to 82%
* 2:1 Input Range
* Pi Input Filter
* Continuous Short Circuit Protection
* Meets EN55022 Class A Conducted
* UL60950-1 Approval



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	CAPACITOR LOAD MAX.
			MIN.	MAX.	NO LOAD	FULL LOAD		
EC4BE01	9-18 VDC	5 VDC	100 mA	2000 mA	30 mA	1100 mA	76	2000uF
EC4BE02	9-18 VDC	12 VDC	45 mA	830 mA	30 mA	1065 mA	78	830uF
EC4BE03	9-18 VDC	15 VDC	35 mA	666 mA	30 mA	1065 mA	78	666uF
EC4BE04	9-18 VDC	±12 VDC	±25 mA	±415 mA	40 mA	1065 mA	78	415uF
EC4BE05	9-18 VDC	±15 VDC	±20 mA	±333 mA	40 mA	1065 mA	78	333uF
EC4BE06	9-18 VDC	±5 VDC	±50 mA	±1000 mA	40 mA	1065 mA	78	1000uF
EC4BE11	18-36 VDC	5 VDC	100 mA	2000 mA	20 mA	535 mA	78	2000uF
EC4BE12	18-36 VDC	12 VDC	45 mA	830 mA	20 mA	520 mA	80	830uF
EC4BE13	18-36 VDC	15 VDC	35 mA	666 mA	20 mA	520 mA	80	666uF
EC4BE14	18-36 VDC	±12 VDC	±25 mA	±415 mA	20 mA	520 mA	80	415uF
EC4BE15	18-36 VDC	±15 VDC	±20 mA	±333 mA	20 mA	520 mA	80	333uF
EC4BE16	18-36 VDC	±5 VDC	±50 mA	±1000 mA	20 mA	520 mA	80	1000uF
EC4BE21	36-72 VDC	5 VDC	100 mA	2000 mA	10 mA	260 mA	80	2000uF
EC4BE22	36-72 VDC	12 VDC	45 mA	830 mA	10 mA	254 mA	82	830uF
EC4BE23	36-72 VDC	15 VDC	35 mA	666 mA	10 mA	254 mA	82	666uF
EC4BE24	36-72 VDC	±12 VDC	±25 mA	±415 mA	10 mA	254 mA	82	415uF
EC4BE25	36-72 VDC	±15 VDC	±20 mA	±333 mA	10 mA	254 mA	82	333uF
EC4BE26	36-72 VDC	±5 VDC	±50 mA	±1000 mA	10 mA	254 mA	82	1000uF

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

SPECIFICATIONS

All Specifications Typical At Nominal Line, Full Load, and 25℃ Unless Otherwise Noted

INPUT SPECIFICATIONS:

Input Voltage Range ..... 12V 9-18V
24V 18-36V
48V 36-72V
Input Surge Voltage (100ms max.) ..... 12V ..... 25Vdc max.
24V ..... 50Vdc max.
48V ..... 100Vdc max.
Input Filter ..... Pi Type

OUTPUT SPECIFICATIONS:

Voltage Accuracy ..... ±1.0% max.
Voltage Balance (Dual) ..... ±1.0% max.
Transient Response
Single 25% Step Load Change ..... <500us
Dual FL-1/2L±1% Error Band ..... <500us
Ripple and Noise, 20MHz BW ..... 100mV pk-pk max.
Temperature Coefficient ..... ±0.02%/°C
Short Circuit Protection ..... Continuous
Line Regulation (note1) ..... ±0.2% max.
Load Regulation (note2) ..... ±1.0% max.
Start up time ..... 12Vin, 24Vin ..... 60ms typ.
48Vin ..... 28ms typ.

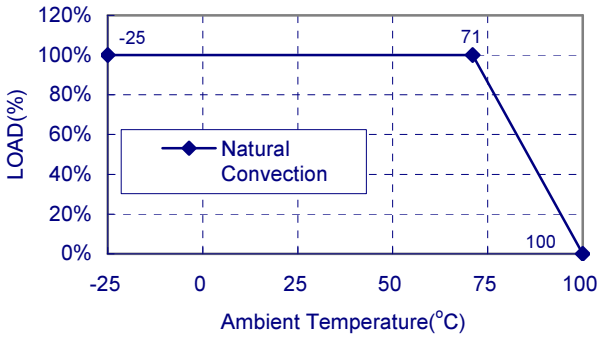
NOTE:

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 be exceeded 100℃.

GENERAL SPECIFICATIONS:

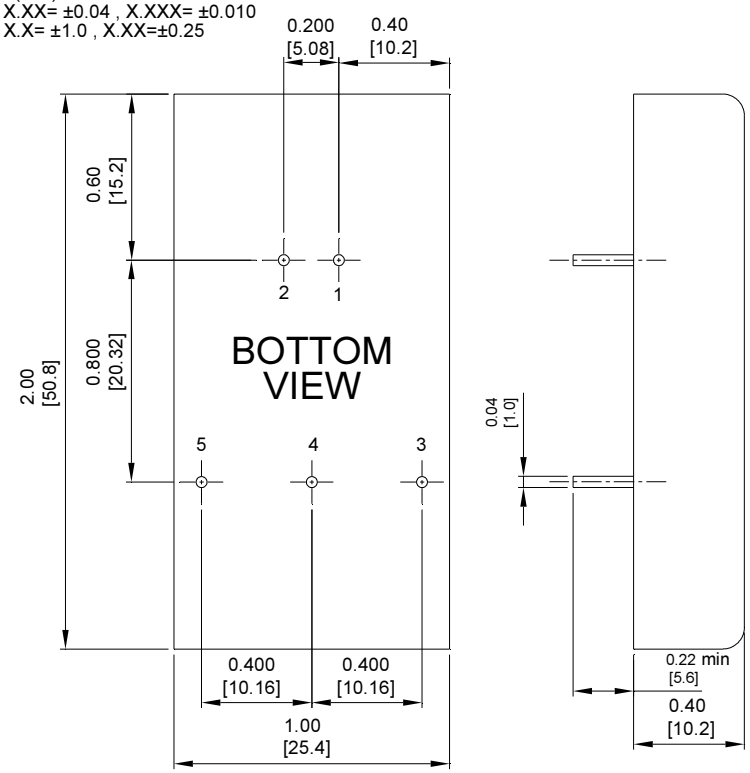
Efficiency ..... See Table
Isolation Voltage ..... 500 VDC min
Isolation Resistance ..... 10^9 ohm min.
Isolation Capacitance ..... 2500pF typ.
Switching Frequency ..... 200KHz min.
Operating Ambient Temperature Range ..... –25℃ to +71℃
De-rating, Above 71℃ ..... Linearly to Zero power at 100℃
Case Temperature (note4) ..... 100℃ max.
Cooling ..... Natural Convection
Storage Temperature Range ..... –40℃ to +100℃
Humidity ..... 95% RH max. Non condensing
MTBF ..... MIL-STD-217F, GB, 25℃, Full Load ..... 1400Khrs typ.
EMI/RFI ..... Six sided Continuous Shield
Dimensions ..... 2.00x1.00x0.40 inches (50.8x25.4x10.2 mm)
Case Material ..... Black Coated Copper with Non-Conductive Base
Weight 33g

Typical Derating curve for Natural Convection



Case B Dimensions:

NOTE: Pin Size is 0.04±0.004 Inch (1.0±0.1 mm)DIA
All Dimensions In Inches (mm)
Tolerances Inches: X.XX= ±0.04 , X.XXX= ±0.010
Millimeters: X.X= ±1.0 , X.XX=±0.25



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

*NP-NO PIN ON SINGLE OUTPUT