EC3AE SERIES
3 WATT
DC-DC CONVERTERS



FEATURES

* 3W Isolated Output
* DIP-24/SMD Package
* Efficiency to 61%
* Regulated Outputs
* LC Input Filter
* Low Ripple and Noise

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF.	CASE
				NO LOAD	FULL LOAD		
EC3AE01M	5 VDC	5 VDC	600 mA	120 mA	984 mA	61	DIP-24
EC3AE02M	5 VDC	12 VDC	250 mA	120 mA	984 mA	61	DIP-24
EC3AE03M	5 VDC	15 VDC	200 mA	120 mA	984 mA	61	DIP-24
EC3AE04M	5 VDC	±12 VDC	±125 mA	120 mA	984 mA	61	DIP-24
EC3AE05M	5 VDC	±15 VDC	±100 mA	120 mA	984 mA	61	DIP-24
EC3AE11M	12 VDC	5 VDC	600 mA	60 mA	410 mA	61	DIP-24
EC3AE12M	12 VDC	12 VDC	250 mA	60 mA	410 mA	61	DIP-24
EC3AE13M	12 VDC	15 VDC	200 mA	60 mA	410 mA	61	DIP-24
EC3AE14M	12 VDC	±12 VDC	±125 mA	60 mA	410 mA	61	DIP-24
EC3AE15M	12 VDC	±15 VDC	±100 mA	60 mA	410 mA	61	DIP-24
EC3AE21M	24 VDC	5 VDC	600 mA	40 mA	205 mA	61	DIP-24
EC3AE22M	24 VDC	12 VDC	250 mA	40 mA	205 mA	61	DIP-24
EC3AE23M	24 VDC	15 VDC	200 mA	40 mA	205 mA	61	DIP-24
EC3AE24M	24 VDC	±12 VDC	±125 mA	40 mA	205 mA	61	DIP-24
EC3AE25M	24 VDC	±15 VDC	±100 mA	40 mA	205 mA	61	DIP-24
EC3AE31M	28 VDC	5 VDC	600 mA	35 mA	176 mA	61	DIP-24
EC3AE32M	28 VDC	12 VDC	250 mA	35 mA	176 mA	61	DIP-24
EC3AE33M	28 VDC	15 VDC	200 mA	35 mA	176 mA	61	DIP-24
EC3AE34M	28 VDC	±12 VDC	±125 mA	35 mA	176 mA	61	DIP-24
EC3AE35M	28 VDC	±15 VDC	±100 mA	35 mA	176 mA	61	DIP-24
EC3AE41M	48 VDC	5 VDC	600 mA	20 mA	102 mA	61	DIP-24
EC3AE42M	48 VDC	12 VDC	250 mA	20 mA	102 mA	61	DIP-24
EC3AE43M	48 VDC	15 VDC	200 mA	20 mA	102 mA	61	DIP-24
EC3AE44M	48 VDC	±12 VDC	±125 mA	20 mA	102 mA	61	DIP-24
EC3AE45M	48 VDC	±15 VDC	±100 mA	20 mA	102 mA	61	DIP-24

SPECIFICATIONS

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

INPUT SPECIFICATIONS:

Input Voltage Range ..... ±10%

Input Filter ..... LC Type

OUTPUT SPECIFICATIONS:

Voltage Accuracy ..... ±3.0% max.

Temperature Coefficient ..... ±0.02%/℃

Ripple & Noise, 20MHz BW ..... 50mV pk-pk max.

Short Circuit Protection ..... Indefinite & Current Limit

Line Regulation (note 1) .....±0.3% max.

Load Regulation (note 2) Single ..... ±0.5% max.

Dual ..... ±1.0% max.

GENERAL SPECIFICATIONS:

Efficiency ..... See Table

Isolation Capacitance ..... 150pF typ.

Isolation Resistance ..... 10^9 ohm min.

Switching Frequency ..... 80KHz typ.

Operating Ambient Temperature Range ..... -25℃ to +71℃

De-rating, Above 71℃ ..... Linearly to Zero power at 100℃

Case Temperature (note 4) ..... 100℃ max.

Cooling ..... Natural Convection

Storage Temperature Range ..... -40℃ to +100℃

Dimensions ..... DIP ..... 1.25x0.80x0.40 inches(31.8x20.3x10.2 mm)

SMD ..... 1.25x0.80x0.45 inches(31.8x20.3x11.4 mm)

Weight 17.2g

ISOLATION VOLTAGE:

500 VDC min. ..... Standard Models

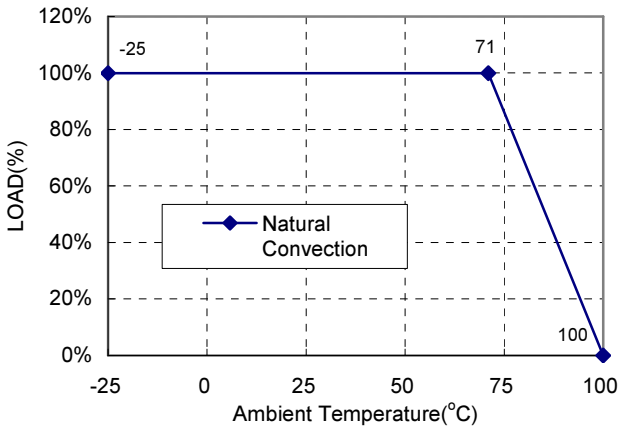
CASE MATERIAL:

Standard Models ..... Black Coated Copper with Non-conductive Base

NOTE:

1. Measured from high line to low line.
2. Measured from full load to 10% load.
3. Suffix “S” to the model number with SMD packages.
4. Maximum case temperature under any operating condition should not be exceeded 100℃.

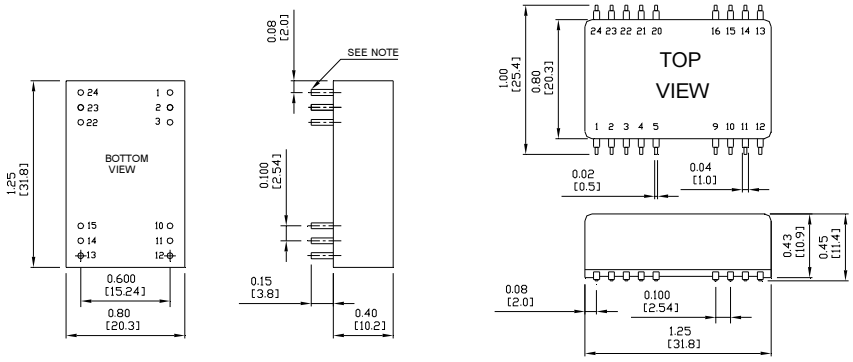
Typical Derating curve for Natural Convection



Case A Dimensions:

NOTE:Pin Size is 0.02±0.002 Inch (0.5±0.05 mm) DIA
All Dimensions In Inches (mm)
Tolerances Inches: X.XX= ±0.02 , X.XXX= ±0.010
Millimeters: X.X= ±0.5 , X.XX=±0.25

CASE AS



PIN CONNECTION				
500 VDC				
Pin	Single Output		Dual Output	
	DIP	SMD	DIP	SMD
1,24	+V Input		+V Input	
2,23	NC		-V Output	
3,22	NC		Common	
4,5	NP	NC	NP	NC
9	NP	NC	NP	NC
10,15	-V Output		Common	
11,14	+V Output		+V Output	
12,13	-V Input		-V Input	
16	NP	NC	NP	NC
20,21	NP	NC	NP	NC

* NC-NO CONNECTION WITH PIN
* NP-No PIN