

EC3AW SERIES

3 WATT 4:1 INPUT RANGE

DC-DC CONVERTERS



FEATURES

- * 3W Isolated Output
- * DIP-24/SMD Package
- * Efficiency to 77%
- * 4:1 Input Range
- * Regulated Outputs
- * Pi Input Filter
- * Continuous Short Circuit Protection
- * Safety Meets IEC/EN/UL 62368-1



MODEL NUMBER ⁽¹⁾	INPUT VOLTAGE ⁽²⁾	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF. ⁽³⁾	CASE
				NO LOAD	FULL LOAD		
EC3AW01□	9-36 VDC	5 VDC	600 mA	15 mA	174 mA	72	DIP-24
EC3AW02□	9-36 VDC	12 VDC	250 mA	15 mA	165 mA	76	DIP-24
EC3AW03□	9-36 VDC	15 VDC	200 mA	15 mA	165 mA	76	DIP-24
EC3AW04□	9-36 VDC	±5 VDC	±300 mA	25 mA	179 mA	70	DIP-24
EC3AW05□	9-36 VDC	±12 VDC	±125 mA	25 mA	174 mA	72	DIP-24
EC3AW06□	9-36 VDC	±15 VDC	±100 mA	25 mA	174 mA	72	DIP-24
EC3AW07□	9-36 VDC	3.3 VDC	600 mA	15 mA	117 mA	70	DIP-24
EC3AW11□	18-72 VDC	5 VDC	600 mA	7.5 mA	87 mA	72	DIP-24
EC3AW12□	18-72 VDC	12 VDC	250 mA	7.5 mA	81 mA	77	DIP-24
EC3AW13□	18-72 VDC	15 VDC	200 mA	7.5 mA	81 mA	77	DIP-24
EC3AW14□	18-72 VDC	±5 VDC	±300 mA	12 mA	88 mA	71	DIP-24
EC3AW15□	18-72 VDC	±12 VDC	±125 mA	12 mA	87 mA	72	DIP-24
EC3AW16□	18-72 VDC	±15 VDC	±100 mA	12 mA	87 mA	72	DIP-24
EC3AW17□	18-72 VDC	3.3 VDC	600 mA	7.5 mA	58 mA	70	DIP-24

NOTE:

1. □ Can be None, M, H, HM, MS or HMS.
2. Nominal Input Voltage 24 or 48 VDC
3. Typical Value at Nominal Input Voltage and Full Load.

SPECIFICATIONS

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

INPUT SPECIFICATIONS:

Input Voltage Range	24V	9-36V
	48V	18-72V
Input Filter	Pi Type	

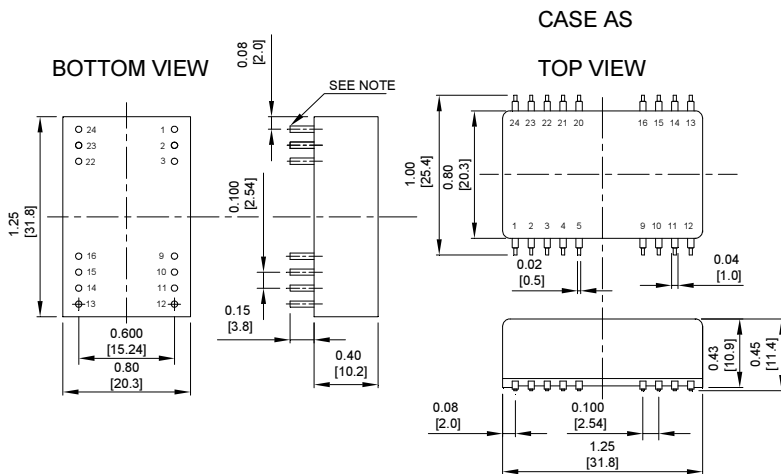
OUTPUT SPECIFICATIONS:

Voltage Accuracy	±2.0% max.
Voltage Balance (Dual)	±1.0% max.
Temperature Coefficient	±0.05%/°C max.
Ripple & Noise, 20MHz BW Single & ±5V	100mV pk-pk max.
Dual	1% pk-pk max.
Short Circuit Protection	Continuous
Line Regulation Single/Dual (note1)	±0.5% max.
Load Regulation Single (note2)	±0.5% max.
Dual (note3)	±1.0% max.

GENERAL SPECIFICATIONS:

Efficiency	See Table
Isolation Resistance	10 ⁹ Ohm min.
Switching Frequency	100KHz min.
Operating Ambient Temperature Range	-25°C to +71°C
De-rating, Above 71°C (Plastic Case)	Linearly to Zero Power at 95°C
De-rating, Above 71°C (Copper Case)	Linearly to Zero Power at 100°C
Case Temperature (Plastic case note6)	95°C max.
(Copper case note6)	100°C max.
Cooling	Natural Convection
Storage Temperature Range	-40°C to +100°C
Dimensions	DIP 1.25x0.80x0.40 inches (31.8x20.3x10.2 mm)
	SMD 1.25x0.80x0.45 inches (31.8x20.3x11.4 mm)
Weight	12.5g

Case A Dimensions:



ISOLATION VOLTAGE:

500 VDC min.	Standard Models
3K VDC min. (note4)	Suffix "H" Models
1.5K VDC min.	Suffix "HM" Models

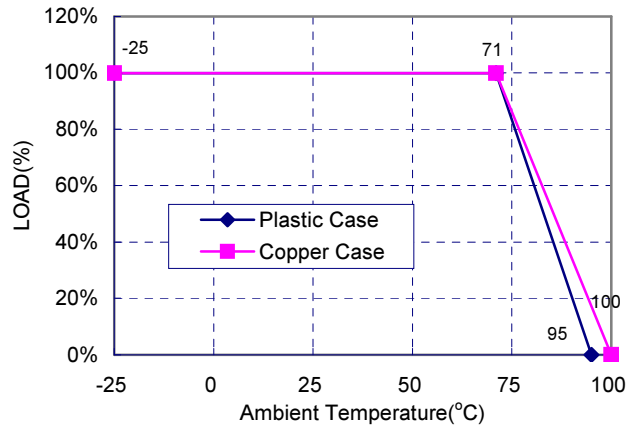
CASE MATERIAL:

Standard Models	Non-Conductive Black Plastic
Suffix "M" Models (note5)	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. Measured from full load to 1/4 load.
4. Non-Conductive black plastic only.
5. Suffix "S" to the model number with SMD packages.
6. Maximum case temperature under any operating condition should not be exceeded 95°C (Plastic Case), 100°C (Copper Case).

Typical Derating curve for Natural Convection



PIN CONNECTION									
500 VDC				1.5K & 3K VDC					
Pin	Single Output		Dual Output		Pin	Single Output		Dual Output	
	DIP	SMD	DIP	SMD		DIP	SMD	DIP	SMD
1,24	+V Input		+V Input		1,24	NP	NC	NP	NC
2,23	NC		-V Output		2,3	-V Input		-V Input	
3,22	NC		Common		4,5	NP	NC	NP	NC
4	NP	NC	NP	NC	9	NC		Common	
5	NP	NC	NP	NC	10,15	NC		NC	
9	NP	NC	NP	NC	11	NC		-V Output	
10,15	-V Output		Common		12,13	NP	NC	NP	NC
11,14	+V Output		+V Output		14	+V Output		+V Output	
12,13	-V Input		-V Input		16	-V Output		Common	
16	NP	NC	NP	NC	20,21	NP	NC	NP	NC
20,21	NP	NC	NP	NC	22,23	+V Input		+V Input	

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