



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



| MODEL NUMBER | INPUT VOLTAGE | OUTPUT VOLTAGE | OUTPUT CURRENT | INPUT CURRENT | | % EFF. | 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. Nominal Input Voltage 24 or 48 VDC

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:

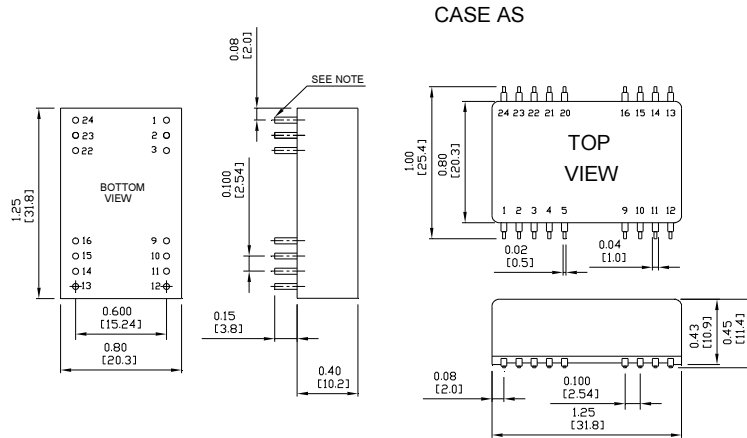
Voltage Accuracy ±2.0% max.
 Voltage Balance (Dual) ±1.0% max.
 Temperature Coefficient ±0.05%/°C
 Ripple & Noise, 20MHz BW Single & ±5V 100mV pk-pk max.
 Dual 1% pk-pk max.
 Short Circuit Protection Continuous
 Line Regulation Single/Dual (note1) ±0.5% max.
 Load Regulation Single (note2) ±0.5% max.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

GENERAL SPECIFICATIONS:

Efficiency See Table
 Isolation Resistance 10⁹ 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:

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



ISOLATION VOLTAGE:

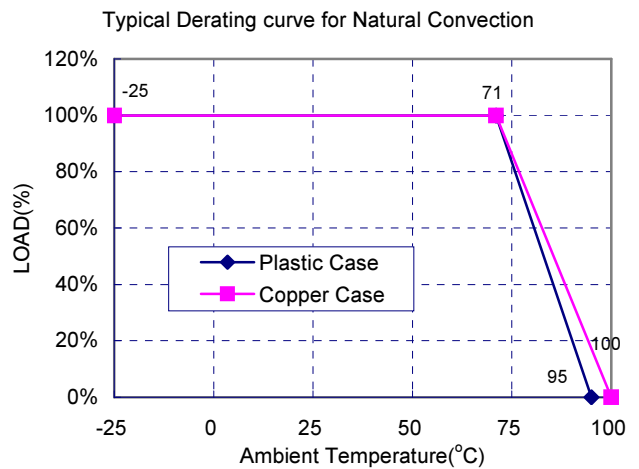
500 VDC min. Standard Models
 3K VDC min. (note4) Suffix "H" Models
 1.5K VDC min. Suffix "HM" Models

CASE MATERIAL:

Standard Models Non-Conductive Black Plastic
 Suffix "M" Models (note 5) 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).



| PIN CONNECTION | | | | | | | | | |
|----------------|---------------|-------------|-------|-----------|---------------|---------------|-------------|----|----|
| Pin | 500 VDC | | | | 1.5K & 3K VDC | | | | |
| | Single Output | Dual Output | DIP | SMD | Pin | Single Output | Dual Output | | |
| 1,24 | +V Input | +V Input | NP | NC | 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