



**THE DATASHEET OF  
AM4TW-2405S-RVZ**





### FEATURES:

- Wide Input Range (4:1)
- 24 Pin DIP Package
- Metal package
- High efficiency up to 75%
- Operating temperature -40°C to + 85°C
- Input / Output isolation 1500 VDC
- Pin compatible with multiple manufacturers
- Continuous short circuit protection



### Models Single output

| Model           | Input Voltage (V) | Output Voltage (V) | Output Current max (mA) | Capacitive load, max (μF) | Efficiency (%) |
|-----------------|-------------------|--------------------|-------------------------|---------------------------|----------------|
| AM4TW-2403S-RVZ | 9-36              | 3.3                | 1000                    | 1000                      | 66             |
| AM4TW-2405S-RVZ | 9-36              | 5                  | 800                     | 1000                      | 71             |
| AM4TW-2412S-RVZ | 9-36              | 12                 | 333                     | 320                       | 74             |
| AM4TW-2415S-RVZ | 9-36              | 15                 | 266                     | 220                       | 74             |
| AM4TW-4803S-RVZ | 18-72             | 3.3                | 1000                    | 1000                      | 66             |
| AM4TW-4805S-RVZ | 18-72             | 5                  | 800                     | 1000                      | 72             |
| AM4TW-4812S-RVZ | 18-72             | 12                 | 333                     | 320                       | 73             |
| AM4TW-4815S-RVZ | 18-72             | 15                 | 266                     | 220                       | 74             |

### Models Dual output

| Model           | Input Voltage (V) | Output Voltage (V) | Output Current max (mA) | Capacitive load, max (μF) | Efficiency (%) |
|-----------------|-------------------|--------------------|-------------------------|---------------------------|----------------|
| AM4TW-2405D-RVZ | 9-36              | ±5                 | ±400                    | ±470                      | 70             |
| AM4TW-2412D-RVZ | 9-36              | ±12                | ±166                    | ±100                      | 72             |
| AM4TW-2415D-RVZ | 9-36              | ±15                | ±133                    | ±68                       | 75             |
| AM4TW-4805D-RVZ | 18-72             | ±5                 | ±400                    | ±470                      | 70             |
| AM4TW-4812D-RVZ | 18-72             | ±12                | ±166                    | ±100                      | 72             |
| AM4TW-4815D-RVZ | 18-72             | ±15                | ±133                    | ±68                       | 73             |

### Input Specifications

| Parameters              | Nominal        | Typical | Maximum | Units |
|-------------------------|----------------|---------|---------|-------|
| Voltage Range           | 24             | 9-36    |         | VDC   |
|                         | 48             | 18-72   |         |       |
| Filter                  | π (Pi) Network |         |         |       |
| Start up time           |                | 20      |         | Ms    |
| Peak Input Voltage time |                | 15      |         | Ms    |
| Absolute Max Rating     | 24 Vin         | -0.7-40 |         | VDC   |

### Isolation Specifications

| Parameters         | Conditions | Typical | Rated | Units |
|--------------------|------------|---------|-------|-------|
| Tested I/O voltage | 3 sec      |         | 1500  | VDC   |
| Resistance         |            | > 1000  |       | MOhm  |
| Capacitance        |            | 60      |       | pF    |

### Output Specifications

| Parameters               | Conditions         | Typical | Maximum | Units  |
|--------------------------|--------------------|---------|---------|--------|
| Voltage Balance          | Balanced Load      | ±1      |         | %      |
| Voltage accuracy         |                    | ±1      |         | %      |
| Short circuit protection | Continuous         |         |         |        |
| Short circuit restart    | Auto Recovery      |         |         |        |
| Line voltage regulation  |                    | ±0.5    |         | %      |
| Load voltage regulation  |                    | ±0.5    |         | %      |
| Temperature coefficient  |                    | ±0.02   |         | %/°C   |
| Ripple & Noise*          | At 20MHz Bandwidth | 60      |         | mV p-p |

\* In order to achieve ripple and noise specification, a 100μF capacitor is required to be connected to the output of the converter

## General Specifications

| Parameters            | Conditions  | Typical                 | Maximum                  | Units |
|-----------------------|---|-------------------------|--------------------------|-------|
| Switching frequency   | 100% load   | 100-400                 |                          | KHz   |
| Operating temperature | Full Load (see derating chart)                          | -40 to +85              |                          | °C    |
| Storage temperature   |   | -40 to +125             |                          | °C    |
| Max Case temperature  |   |                         | 100                      | °C    |
| Cooling               | Free air convection                                     |                         |                          |       |
| Humidity              |   |                         | 95                       | %     |
| Case material         | Nickel coated copper                                    |                         |                          |       |
| Weight                |   | 12.16                   |                          | g     |
| Dimensions(L x W x H) | Tolerance $\pm 0.5$ mm or $\pm 0.02$ inches             | 1.25 x 0.8 x 0.4 inches | 31.75 x 20.32 x 10.16 mm |       |
| MTBF                  | >2,200,000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C) |                         |                          |       |

## Safety Specifications

### Parameters

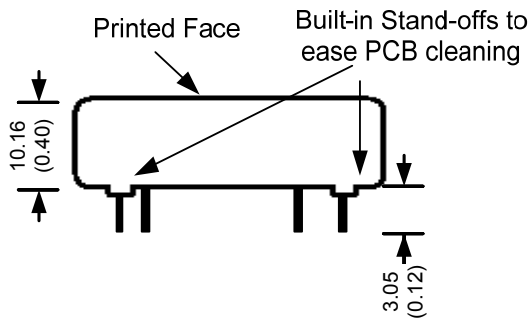
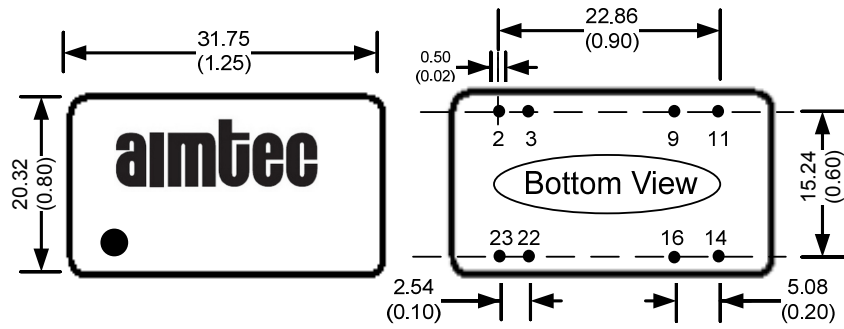
|           |                              |
|-----------|------------------------------|
| Standards | Designed to meet IEC 60950-1 |
|-----------|------------------------------|

NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

## Pin Out Specifications

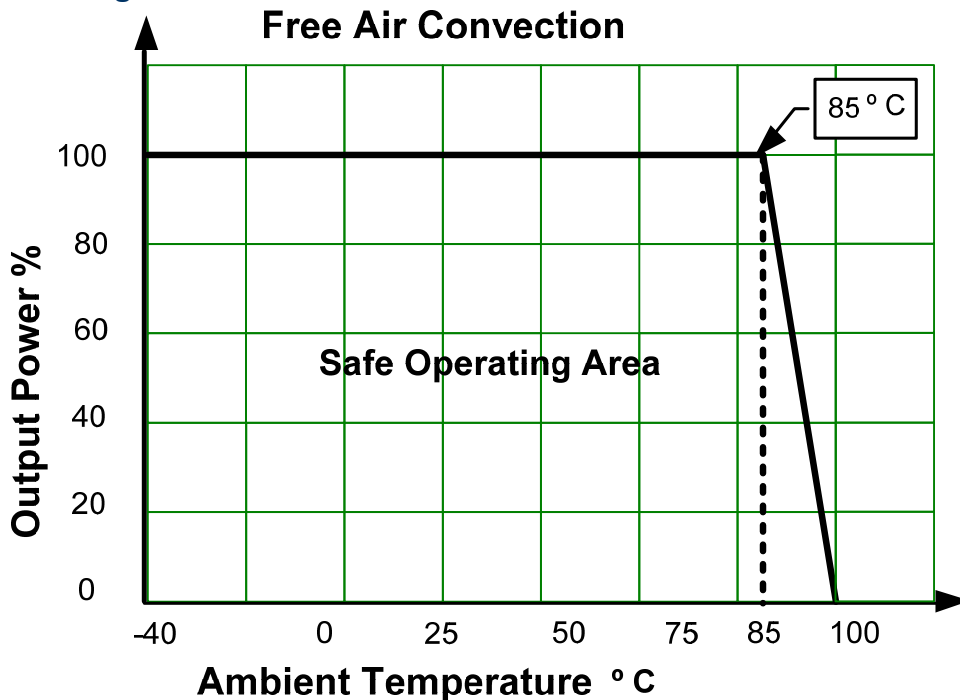
| Pin | 1500 VDC  |           |
|-----|-----------|-----------|
|     | Single    | Dual      |
| 2   | -V Input  | -V Input  |
| 3   | -V Input  | -V Input  |
| 9   | No pin    | Common    |
| 11  | N.C.      | -V Output |
| 14  | +V Output | +V Output |
| 16  | -V Output | Common    |
| 22  | +V Input  | +V Input  |
| 23  | +V Input  | +V Input  |

**Dimensions**



All dimensions are typical: millimeters (inches)  
 Pin Diameter:  $0.50 \pm 0.05$  ( $0.02 \pm 0.002$ )  
 Pin Pitch Tolerance:  $\pm 0.35$  ( $\pm 0.014$ )  
 Case Tolerance:  $\pm 0.5$  ( $\pm 0.02$ )

**Derating**



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