

## 2 watt dc-dc converters

- 4PIN SIP PACKAGE
- LOW RIPPLE & NOISE
- HIGH EFFICIENCY UP TO 85%
- ULTRA MINIATURE PACKAGE
- INPUT/OUTPUT ISOLATION: 1000 & 3000VDC
- OPERATING TEMPERATURE: -40°C ... +85°C
- PIN-COMPATIBLE WITH MULTIPLE MANUFACTURERS

### GENERAL DESCRIPTION

Our AM2S series is a family of cost effective 2W single output DC-DC converters. These converters achieve low cost and ultra-miniature SIP4 pin size without compromising performance and reliability.

Forty eight models operate from input voltages of 5, 12 & 24VDC; producing output voltage levels of 3.3, 5, 7.2, 9, 12, 15, 18, 24VDC. Full SMD-design and a 100% production test of parameters ensures a high reliability in this product.

### ELECTRICAL SPECIFICATIONS

Specifications typical at +25°C, nominal input voltage, rated output current unless otherwise specified

#### Input Specifications:

|               |           |
|---------------|-----------|
| Voltage range | ±10%      |
| Filter        | Capacitor |

#### Isolation Specifications:

|               |                    |
|---------------|--------------------|
| Rated voltage | 1000VDC<br>3000VDC |
| Resistance    | > 1000MΩ           |
| Capacitance   | 60pF, typ.         |

#### Output Specifications:

|                              |                     |
|------------------------------|---------------------|
| Voltage accuracy             | ±5%, max.           |
| Ripple & noise (at 20MHz BW) | 150mVp-p, max.      |
| Short circuit protection     | Momentary           |
| Line voltage regulation      | ±1.2% / 1.0% of Vin |
| Load voltage regulation      | ±8%, load=20~100%   |
| Temperature coefficient      | ±0.02%/°C, typ.     |

#### General Specifications:

|                     |                        |
|---------------------|------------------------|
| Efficiency          | 71% to 85%             |
| Switching frequency | 125KHz, typ. 100% load |

#### Environmental Specifications:

|                                 |                     |
|---------------------------------|---------------------|
| Operating temperature (ambient) | -40°C ... +85°C     |
| Storage temperature             | -55°C ... +125°C    |
| Case temperature                | +90°C, max.         |
| Derating                        | None required       |
| Humidity (non-condensing)       | Up to 90%           |
| Cooling                         | Free-air Convection |

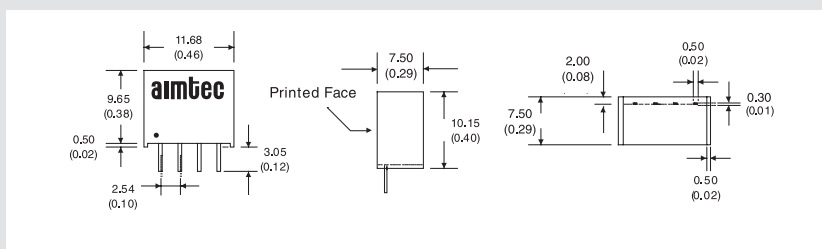
#### Physical Specifications:

|               |  |
|---------------|--|
| Dimensions    | 11.68x7.50x10.15mm<br>0.46x0.29x0.40inches |
| Weight        | 2.5g                                       |
| Case material | Non-conductive black plastic               |

MTBF: > 668,000 hrs (MIL-HDBK-217F, Ground Benign, t=+25°C)

Specifications are subject to change without notification

### OUTLINE DIMENSIONS & PIN CONNECTIONS



| Pin | 1000 & 3000VDC |
|-----|----------------|
|     | Single         |
| 1   | -V Input       |
| 2   | +V Input       |
| 3   | -V Output      |
| 4   | +V Output      |

Continued on next page

# AM2S Series

## MODELS Single output

DC-DC CONVERTERS

| Models            |                   | Input Voltage | Output Voltage | Output Current max. |
|-------------------|-------------------|---------------|----------------|---------------------|
| Isolation 1000VDC | Isolation 3000VDC |               |                |                     |
| AM2S-0503S        | AM2S-0503SH30     | 5V±10%        | 3.3VDC         | 400mA               |
| AM2S-0505S        | AM2S-0505SH30     |               | 5VDC           | 400mA               |
| AM2S-0507S        | AM2S-0507SH30     |               | 7.2VDC         | 278mA               |
| AM2S-0509S        | AM2S-0509SH30     |               | 9VDC           | 222mA               |
| AM2S-0512S        | AM2S-0512SH30     |               | 12VDC          | 167mA               |
| AM2S-0515S        | AM2S-0515SH30     |               | 15VDC          | 133mA               |
| AM2S-0518S        | AM2S-0518SH30     |               | 18VDC          | 111mA               |
| AM2S-0524S        | AM2S-0524SH30     |               | 24VDC          | 83mA                |
| AM2S-1203S        | AM2S-1203SH30     | 12V±10%       | 3.3VDC         | 400mA               |
| AM2S-1205S        | AM2S-1205SH30     |               | 5VDC           | 400mA               |
| AM2S-1207S        | AM2S-1207SH30     |               | 7.2VDC         | 278mA               |
| AM2S-1209S        | AM2S-1209SH30     |               | 9VDC           | 222mA               |
| AM2S-1212S        | AM2S-1212SH30     |               | 12VDC          | 167mA               |
| AM2S-1215S        | AM2S-1215SH30     |               | 15VDC          | 133mA               |
| AM2S-1218S        | AM2S-1218SH30     |               | 18VDC          | 111mA               |
| AM2S-1224S        | AM2S-1224SH30     |               | 24VDC          | 83mA                |
| AM2S-2403S        | AM2S-2403SH30     | 24V±10%       | 3.3VDC         | 400mA               |
| AM2S-2405S        | AM2S-2405SH30     |               | 5VDC           | 400mA               |
| AM2S-2407S        | AM2S-2407SH30     |               | 7.2VDC         | 278mA               |
| AM2S-2409S        | AM2S-2409SH30     |               | 9VDC           | 222mA               |
| AM2S-2412S        | AM2S-2412SH30     |               | 12VDC          | 167mA               |
| AM2S-2415S        | AM2S-2415SH30     |               | 15VDC          | 133mA               |
| AM2S-2418S        | AM2S-2418SH30     |               | 18VDC          | 111mA               |
| AM2S-2424S        | AM2S-2424SH30     |               | 24VDC          | 83mA                |