

1 watt dc-dc converters

- 7PIN SIP PACKAGE
- REGULATED OUTPUT VOLTAGE
- LOW RIPPLE & NOISE
- HIGH EFFICIENCY UP TO 70%
- INPUT/OUTPUT ISOLATION: 1000 & 3000VDC
- OPERATING TEMPERATURE: -40°C ... +85°C
- PIN-COMPATIBLE WITH MULTIPLE MANUFACTURERS

GENERAL DESCRIPTION

Our AM1DR series is a family of cost effective 1W single output isolated DC-DC converters. These converters achieve low cost and ultra-miniature SIP7 pin size without compromising performance and reliability.

Thirty models operates from input voltages of 5, 12 & 24VDC; producing regulated output voltage levels of 3.3, 5, 9, 12, 15VDC. 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 (60 sec) | 1000VDC 3000VDC |
| Resistance | > 1000MΩ |
| Capacitance | 60pF, typ. |

Output Specifications:

| | |
|------------------------------|-----------------|
| Voltage accuracy | ±3%, max. |
| Ripple & noise (at 20MHz BW) | 50 mVp-p, max. |
| Short circuit protection | Momentary |
| Line voltage regulation | ±0.5%, max. |
| Load voltage regulation | ±0.5%, max. |
| Temperature coefficient | ±0.02%/°C, typ. |

General Specifications:

| | |
|---------------------|------------------------|
| Efficiency | 58% to 70% |
| Switching frequency | 125KHz, typ. 100% load |

Environmental Specifications:

| | |
|---------------------------------|---------------------|
| Operating temperature (ambient) | -40°C ... +85°C |
| Storage temperature | -55°C ... +125°C |
| Case Temperature | +95°C, max. |
| Derating | None required |
| Humidity (non-condensing) | Up to 90% |
| Cooling | Free-air Convection |

Physical Specifications:

| | |
|---------------|--|
| Dimensions | 19.50x7.20x10.00mm 0.76x0.28x0.39inches |
| Weight | 2.7g |
| Case material | Non-conductive black plastic |

MTBF: > 880,000 hrs (MIL-HDBK-217F, Ground Benign, t=+25°C)

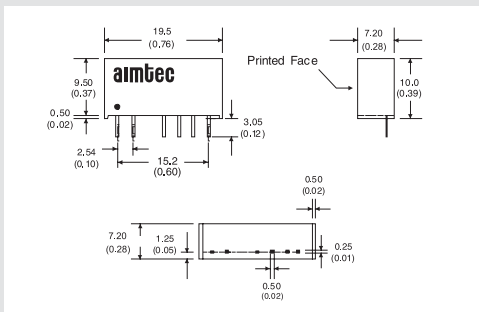
Specifications are subject to change without notification

AM1DR Series

MODELS

| Models | | Input Voltage | Output Voltage | Output Current max. |
|-------------------|-------------------|---------------|----------------|---------------------|
| Isolation 1000VDC | Isolation 3000VDC | | | |
| AM1DR-0503S | AM1DR-0503SH30 | 5V±10% | 3.3VDC | 200mA |
| AM1DR-0505S | AM1DR-0505SH30 | | 5VDC | 200mA |
| AM1DR-0509S | AM1DR-0509SH30 | | 9VDC | 111mA |
| AM1DR-0512S | AM1DR-0512SH30 | | 12VDC | 84mA |
| AM1DR-0515S | AM1DR-0515SH30 | | 15VDC | 67mA |
| AM1DR-1203S | AM1DR-1203SH30 | 12V±10% | 3.3VDC | 200mA |
| AM1DR-1205S | AM1DR-1205SH30 | | 5VDC | 200mA |
| AM1DR-1209S | AM1DR-1209SH30 | | 9VDC | 111mA |
| AM1DR-1212S | AM1DR-1212SH30 | | 12VDC | 84mA |
| AM1DR-1215S | AM1DR-1215SH30 | | 15VDC | 67mA |
| AM1DR-2403S | AM1DR-2403SH30 | 24V±10% | 3.3VDC | 200mA |
| AM1DR-2405S | AM1DR-2405SH30 | | 5VDC | 200mA |
| AM1DR-2409S | AM1DR-2409SH30 | | 9VDC | 111mA |
| AM1DR-2412S | AM1DR-2412SH30 | | 12VDC | 84mA |
| AM1DR-2415S | AM1DR-2415SH30 | | 15VDC | 67mA |

OUTLINE DIMENSIONS & PIN CONNECTIONS



| Pin | 1000VDC | 3000VDC |
|-----|-----------|-----------|
| 1 | +V Input | +V Input |
| 2 | -V Input | -V Input |
| 4 | -V Output | Omitted |
| 5 | Omitted | -V Output |
| 6 | +V Output | Omitted |
| 7 | Omitted | +V Output |