

AM5T Series



5 watt dc-dc converters

- 24-PIN DIP PACKAGE
- WIDE 2:1 INPUT RANGE
- HIGH EFFICIENCY UP TO 80%
- LOW PROFILE METAL PACKAGE
- INPUT/OUTPUT ISOLATION: 1500 & 3500 VDC
- CONTINUOUS SHORT CIRCUIT PROTECTION
- OPERATING TEMPERATURE: -40°C ... +85°C
- PIN-COMPATIBLE WITH MULTIPLE MANUFACTURERS

GENERAL DESCRIPTION

Our AM5T series is a family of cost effective 5W single and dual output DC-DC converters. Input voltages of 12, 24 & 48 VDC with output voltages of 3.3, 5, 7.2, 9, 12, 15,

18, 24, ± 3.3 , ± 5 , ± 7.2 , ± 9 , ± 12 , ± 15 , ± 18 & ± 24 VDC. 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 stated.

Input Specifications:

| | |
|---------------|---|
| Voltage range | 12VDC, 9~18 VDC 24VDC, 18~36 VDC 48VDC, 36~72 VDC |
| Filter | π (Pi) Network |

Isolation Specifications:

| | |
|------------------------|------------------|
| Rated voltage (60 sec) | 1500 & 3500VDC |
| Resistance | > 1000M Ω |
| Capacitance | 120pF, typ. |

Environmental Specifications:

| | |
|---------------------------------|---------------------|
| Operating temperature (ambient) | -40°C ... +85°C |
| Storage temperature | -55°C ... +125°C |
| Case temperature | +100°C, max. |
| Derating | None required |
| Humidity (non-condensing) | Up to 90% |
| Cooling | Free-air convection |

General Specifications:

| | |
|---------------------|------------------------|
| Efficiency | 74% to 80% |
| Switching Frequency | 250KHz, typ. 100% load |

Output Specifications:

| | |
|-------------------------------|------------------------|
| Voltage accuracy | $\pm 1\%$ max. |
| Voltage balance (Dual Output) | $\pm 1\%$ |
| Ripple & Noise (at 20MHz BW) | 60m Vp-p, max. |
| Short circuit protection | Continuous |
| Short circuit restart | Automatic |
| Line voltage regulation | $\pm 0.5\%$, max. |
| Load voltage regulation | $\pm 0.5\%$, max. |
| Temperature coefficient | $\pm 0.02\%$ /°C, typ. |

Physical Specifications:

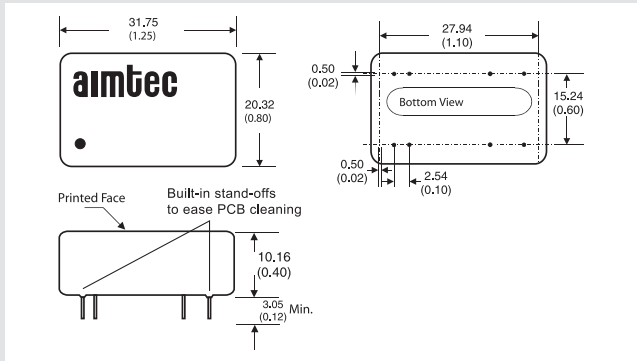
| | |
|---------------|--|
| Dimensions | 31.75x20.32x10.16mm 1.25x0.8x0.4 inches |
| Weight | 19g |
| Case material | Nickel-Coated Copper |

MTBF: > 1,009,000 hrs (MIL-HDBK-217F, Ground Benign, t=+25°C)

Specifications are subject to change without notification

AM5T Series

OUTLINE DIMENSIONS & PIN CONNECTIONS



| Pin | 1500 & 3500 VDC | |
|-----|-----------------|-----------|
| | Single | Dual |
| 2 | -V Input | -V Input |
| 3 | -V Input | -V Input |
| 9 | N.C. | 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 |

MODELS

Single output

| Models | | Input Voltage | Output Voltage | Output Current max. |
|-------------------|-------------------|----------------|----------------|---------------------|
| Isolation 1500VDC | Isolation 3500VDC | | | |
| AM5T-1203S | AM5T-1203SH35 | 9VDC - 18VDC | 3.3VDC | 1250mA |
| AM5T-1205S | AM5T-1205SH35 | | 5VDC | 1000mA |
| AM5T-1207S | AM5T-1207SH35 | | 7.2VDC | 694mA |
| AM5T-1209S | AM5T-1209SH35 | | 9VDC | 556mA |
| AM5T-1212S | AM5T-1212SH35 | | 12VDC | 417mA |
| AM5T-1215S | AM5T-1215SH35 | | 15VDC | 333mA |
| AM5T-1218S | AM5T-1218SH35 | | 18VDC | 278mA |
| AM5T-1224S | AM5T-1224SH35 | | 24VDC | 208mA |
| AM5T-2403S | AM5T-2403SH35 | | 18VDC - 36VDC | 3.3VDC |
| AM5T-2405S | AM5T-2405SH35 | 5VDC | | 1000mA |
| AM5T-2407S | AM5T-2407SH35 | 7.2VDC | | 694mA |
| AM5T-2409S | AM5T-2409SH35 | 9VDC | | 556mA |
| AM5T-2412S | AM5T-2412SH35 | 12VDC | | 417mA |
| AM5T-2415S | AM5T-2415SH35 | 15VDC | | 333mA |
| AM5T-2418S | AM5T-2418SH35 | 18VDC | | 278mA |
| AM5T-2424S | AM5T-2424SH35 | 24VDC | | 208mA |
| AM5T-4803S | AM5T-4803SH35 | 36VDC - 72 VDC | | 3.3VDC |
| AM5T-4805S | AM5T-4805SH35 | | 5VDC | 1000mA |
| AM5T-4807S | AM5T-4807SH35 | | 7.2VDC | 694mA |
| AM5T-4809S | AM5T-4809SH35 | | 9VDC | 556mA |
| AM5T-4812S | AM5T-4812SH35 | | 12VDC | 417mA |
| AM5T-4815S | AM5T-4815SH35 | | 15VDC | 333mA |
| AM5T-4818S | AM5T-4818SH35 | | 18VDC | 278mA |
| AM5T-4824S | AM5T-4824SH35 | | 24VDC | 208mA |

AM5T Series

MODELS Dual output

DC-DC CONVERTERS

| Models | | Input Voltage | Ouput Voltage | Ouput Current max. |
|-------------------|-------------------|---------------|---------------|--------------------|
| Isolation 1500VDC | Isolation 3500VDC | | | |
| AM5T-1203D | AM5T-1203DH35 | 9VDC - 18VDC | ±3.3VDC | ±625mA |
| AM5T-1205D | AM5T-1205DH35 | | ±5VDC | ±500mA |
| AM5T-1207D | AM5T-1207DH35 | | ±7.2VDC | ±347mA |
| AM5T-1209D | AM5T-1209DH35 | | ±9VDC | ±278mA |
| AM5T-1212D | AM5T-1212DH35 | | ±12VDC | ±209mA |
| AM5T-1215D | AM5T-1215DH35 | | ±15VDC | ±167mA |
| AM5T-1218D | AM5T-1218DH35 | | ±18VDC | ±139mA |
| AM5T-1224D | AM5T-1224DH35 | | ±24VDC | ±104mA |
| AM5T-2403D | AM5T-2403DH35 | | 18VDC - 36VDC | ±3.3VDC |
| AM5T-2405D | AM5T-2405DH35 | ±5VDC | | ±500mA |
| AM5T-2407D | AM5T-2407DH35 | ±7.2VDC | | ±347mA |
| AM5T-2409D | AM5T-2409DH35 | ±9VDC | | ±278mA |
| AM5T-2412D | AM5T-2412DH35 | ±12VDC | | ±209mA |
| AM5T-2415D | AM5T-2415DH35 | ±15VDC | | ±167mA |
| AM5T-2418D | AM5T-2418DH35 | ±18VDC | | ±139mA |
| AM5T-2424D | AM5T-2424DH35 | ±24VDC | | ±104mA |
| AM5T-4803D | AM5T-4803DH35 | 36VDC - 72VDC | | ±3.3VDC |
| AM5T-4805D | AM5T-4805DH35 | | ±5VDC | ±500mA |
| AM5T-4807D | AM5T-4807DH35 | | ±7.2VDC | ±347mA |
| AM5T-4809D | AM5T-4809DH35 | | ±9VDC | ±278mA |
| AM5T-4812D | AM5T-4812DH35 | | ±12VDC | ±209mA |
| AM5T-4815D | AM5T-4815DH35 | | ±15VDC | ±167mA |
| AM5T-4818D | AM5T-4818DH35 | | ±18VDC | ±139mA |
| AM5T-4824D | AM5T-4824DH35 | | ±24VDC | ±104mA |