

## 4 watt dc-dc converters



- 24PIN SIL PACKAGE
- WIDE 2:1 INPUT RANGE
- HIGH EFFICIENCY UP TO 81%
- LOW PROFILE METAL PACKAGE
- INPUT/OUTPUT ISOLATION: 1500 or 3500VDC
- CONTINUOUS SHORT CIRCUIT PROTECTION
- OPERATING TEMPERATURE: -40°C ... +85°C
- PIN-COMPATIBLE WITH OTHER MANUFACTURERS

### GENERAL DESCRIPTION

The AM4T series is a family of cost effective 4W single and dual outputs DC-DC converters. Input voltages of 12, 24 and 48VDC with output voltages of 3.3, 5, 7.2, 9, 12, 15,

18, 24,  $\pm 3.3$ ,  $\pm 5$ ,  $\pm 7.2$ ,  $\pm 9$ ,  $\pm 12$ ,  $\pm 15$ ,  $\pm 18$  or  $\pm 24$ VDC. Full SMD-design and a 100% production test of parameters ensure a high reliability of this product.

### ELECTRICAL SPECIFICATIONS

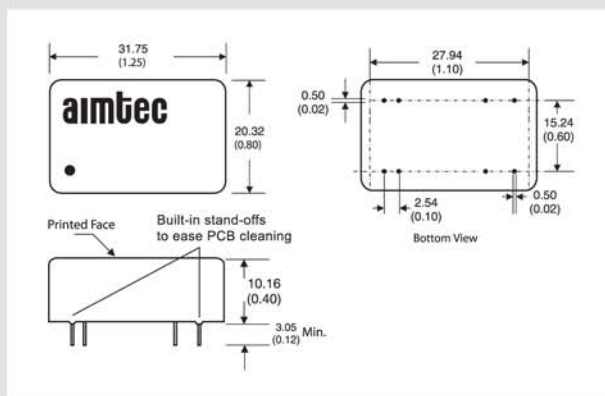
Specifications typical at +25°C, nominal input voltage, rated output current unless otherwise specified

Input Specifications:		General Specifications:	
Voltage range	12VDC, 9~18VDC 24VDC, 18~36VDC 48VDC, 36~72VDC	Efficiency	73% to 81%
Filter	$\pi$ (Pi) Network	Switching frequency	250KHz, typ
Isolation Specifications:		Output Specifications:	
Rated voltage (60 sec)	1500, 3500VDC	Voltage accuracy	$\pm 1\%$ , max
Leakage current	1mA	Voltage balance (dual outputs)	$\pm 1\%$
Resistance	> 1000M $\Omega$	Ripple and noise (at 20MHz BW)	60mVp-p, max
Capacitance	120pF, typ	Short circuit protection	Continuous
		Short circuit restart	Automatic
		Line voltage regulation	$\pm 0.5\%$ , max
		Load voltage regulation	$\pm 0.5\%$ , max
		Temperature coefficient	$\pm 0.02\%/^{\circ}\text{C}$
Environmental Specifications:		Physical Specifications	
Operating temperature (ambient)	-40°C ... +85°C	Dimensions	31.75x20.32x10.16mm 1.25x0.80x0.40inches
Storage temperature	-55°C ... +125°C	Weight	19g
Derating	None required	Case material	Nickel-Coated Copper
Humidity (non-condensing)	Up to 90%		
Cooling	Free-air Convection		

MTBF: > 1 036 000 hrs (MIL-HDBK-217F, Ground Benign,  $t=+25^{\circ}\text{C}$ )

Specifications are subject to change without notification

# OUTLINE DIMENSIONS & PIN CONNECTIONS



Pin	1500, 3500VDC	
	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			
AM4T-1203S	AM4T-1203SH35	9VDC - 18VDC	3.3VDC	1000mA
AM4T-1205S	AM4T-1205SH35		5VDC	800mA
AM4T-1207S	AM4T-1207SH35		7.2VDC	556mA
AM4T-1209S	AM4T-1209SH35		9VDC	444mA
AM4T-1212S	AM4T-1212SH35		12VDC	333mA
AM4T-1215S	AM4T-1215SH35		15VDC	267mA
AM4T-1218S	AM4T-1218SH35		18VDC	222mA
AM4T-1224S	AM4T-1224SH35		24VDC	167mA
AM4T-2403S	AM4T-2403SH35	18VDC - 36VDC	3.3VDC	1000mA
AM4T-2405S	AM4T-2405SH35		5VDC	800mA
AM4T-2407S	AM4T-2407SH35		7.2VDC	556mA
AM4T-2409S	AM4T-2409SH35		9VDC	444mA
AM4T-2412S	AM4T-2412SH35		12VDC	333mA
AM4T-2415S	AM4T-2415SH35		15VDC	267mA
AM4T-2418S	AM4T-2418SH35		18VDC	222mA
AM4T-2424S	AM4T-2424SH35		24VDC	167mA
AM4T-4803S	AM4T-4803SH35	36VDC - 72VDC	3.3VDC	1000mA
AM4T-4805S	AM4T-4805SH35		5VDC	800mA
AM4T-4807S	AM4T-4807SH35		7.2VDC	556mA
AM4T-4809S	AM4T-4809SH35		9VDC	444mA
AM4T-4812S	AM4T-4812SH35		12VDC	333mA
AM4T-4815S	AM4T-4815SH35		15VDC	267mA
AM4T-4818S	AM4T-4818SH35		18VDC	222mA
AM4T-4824S	AM4T-4824SH35		24VDC	167mA

# MODELS

## Dual output

Models		Input voltage	Output voltage	Output current max.
Isolation 1500VDC	Isolation 3500VDC			
AM4T-1203D	AM4T-1203DH35	9VDC - 18VDC	±3.3VDC	±500mA
AM4T-1205D	AM4T-1205DH35		±5VDC	±400mA
AM4T-1207D	AM4T-1207DH35		±7.2VDC	±278mA
AM4T-1209D	AM4T-1209DH35		±9VDC	±222mA
AM4T-1212D	AM4T-1212DH35		±12VDC	±167mA
AM4T-1215D	AM4T-1215DH35		±15VDC	±133mA
AM4T-1218D	AM4T-1218DH35		±18VDC	±111mA
AM4T-1224D	AM4T-1224DH35		±24VDC	±83mA
AM4T-2403D	AM4T-2403DH35	18VDC - 36VDC	±3.3VDC	±500mA
AM4T-2405D	AM4T-2405DH35		±5VDC	±400mA
AM4T-2407D	AM4T-2407DH35		±7.2VDC	±278mA
AM4T-2409D	AM4T-2409DH35		±9VDC	±222mA
AM4T-2412D	AM4T-2412DH35		±12VDC	±167mA
AM4T-2415D	AM4T-2415DH35		±15VDC	±133mA
AM4T-2418D	AM4T-2418DH35		±18VDC	±111mA
AM4T-2424D	AM4T-2424DH35		±24VDC	±83mA
AM4T-4803D	AM4T-4803DH35	36VDC - 72VDC	±3.3VDC	±500mA
AM4T-4805D	AM4T-4805DH35		±5VDC	±400mA
AM4T-4807D	AM4T-4807DH35		±7.2VDC	±278mA
AM4T-4809D	AM4T-4809DH35		±9VDC	±222mA
AM4T-4812D	AM4T-4812DH35		±12VDC	±167mA
AM4T-4815D	AM4T-4815DH35		±15VDC	±133mA
AM4T-4818D	AM4T-4818DH35		±18VDC	±111mA
AM4T-4824D	AM4T-4824DH35		±24VDC	±83mA

### INPUT CURRENT No Load / Full Load

12 Vin models	25 / 410mA, typ
24 Vin models	23 / 215mA, typ
48 Vin models	20 / 110mA, typ