

3 watt dc-dc converters

- 24 PIN DIP PACKAGE
- WIDE 2:1 INPUT RANGE
- HIGH EFFICIENCY UP TO 79%
- CONTINUOUS SHORT CIRCUIT PROTECTION
- INPUT/OUTPUT ISOLATION: 1500 & 3500VDC
- OPERATING TEMPERATURE: -40°C ... +85°C
- PIN-COMPATIBLE WITH MULTIPLE MANUFACTURERS
- LOW PROFILE METAL PACKAGE

GENERAL DESCRIPTION

Our AM3T series is a family of cost effective 3W single and dual output DC-DC converters. These converters combine nickel-coated copper package in a 24-pin DIP compatible case with high performance features such as 1500 & 3500VDC input/output isolation voltage, continuous short circuit protection with automatic restart and tight line / load regulation. Wide range devices operate over 2:1 input voltage range providing stable output voltage. Devices are encapsulated using flame retardant resin. Ninety six models operate from input voltages of 12, 24 & 48VDC with output voltages of 3.3, 5, 7.2, 9, 12, 15, 18, 24, ±3.3, ±5, ±7.2, ±9, ±12, ±15, ±18 & ±24VDC. High performance features include high efficiency operation up to 79% and output voltage accuracy of ±1% maximum. All models are package in a low profile 31.75 x 20.32 x 10.16mm 24 pin DIP nickel-coated copper case. Operation is specified over the full operating temperature range of -40°C to +85°C with no derating required. Cooling is by free-air convection.

ELECTRICAL SPECIFICATIONS

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

Input Specifications:	
Voltage range	12VDC, 9~18VDC 24VDC, 18~36VDC 48VDC, 36~72VDC
Filter	p (Pi) Network

Isolation Specifications:	
Rated voltage (60 sec)	1500, 3500VDC
Resistance	> 1000MOhm
Capacitance	80pF, 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 79%
Switching frequency	250KHz, typ. 100% load

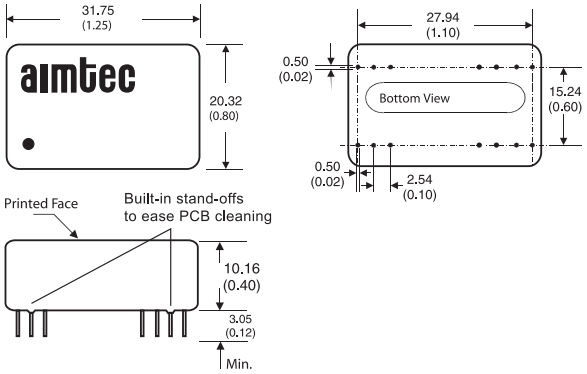
Output Specifications:	
Voltage accuracy	±1%, max.
Voltage balance (Dual Output)	±1%
Ripple & noise (at 20MHz BW)	60mVp-p, max.
Short circuit protection	Continuous
Short circuit restart	Automatic
Line voltage regulation	±0.5%, max.
Load voltage regulation	±0.5%, max.
Temperature coefficient	±0.02%/°C, typ.

Physical Specifications:	
Dimensions	31.75x20.32x10.16mm 1.25x0.8x0.4inches
Weight	16.3g
Case material	Nickel-Coated Copper

MTBF: > 1,039,000 hrs (MIL-HDBK-217F, Ground Benign, t=+25°C)

Specifications are subject to change without notification

OUTLINE DIMENSIONS & PIN CONNECTIONS



Pin	1500VDC		3500VDC	
	Single	Dual	Single	Dual
1	+V Input	+V Input	Omitted	Omitted
2	N.C	-V Output	-V Input	-V Input
3	N.C	Common	-V Input	-V Input
9	Omitted	Omitted	N.C	Common
10	-V Output	Common	Omitted	Omitted
11	+V Output	+V Output	N.C	-V Output
12/13	-V Input	-V Input	Omitted	Omitted
14	+V Output	+V Output	+V Output	+V Output
15	-V Output	Common	Omitted	Omitted
16	Omitted	Omitted	-V Output	Common
22	N.C	Common	+V Input	+V Input
23	N.C	-V Output	+V Input	+V Input
24	+V Input	+V Input	Omitted	Omitted

MODELS

Single output

Models		Input Voltage	Ouput Voltage	Ouput Current max.
Isolation 1500VDC	Isolation 3500VDC			
AM3T-1203S	AM3T-1203SH35	9VDC - 18VDC	3.3VDC	800mA
AM3T-1205S	AM3T-1205SH35		5VDC	600mA
AM3T-1207S	AM3T-1207SH35		7.2VDC	417mA
AM3T-1209S	AM3T-1209SH35		9VDC	333mA
AM3T-1212S	AM3T-1212SH35		12VDC	250mA
AM3T-1215S	AM3T-1215SH35		15VDC	200mA
AM3T-1218S	AM3T-1218SH35		18VDC	167mA
AM3T-1224S	AM3T-1224SH35		24VDC	125mA
AM3T-2403S	AM3T-2403SH35	18VDC - 36VDC	3.3VDC	800mA
AM3T-2405S	AM3T-2405SH35		5VDC	600mA
AM3T-2407S	AM3T-2407SH35		7.2VDC	417mA
AM3T-2409S	AM3T-2409SH35		9VDC	333mA
AM3T-2412S	AM3T-2412SH35		12VDC	250mA
AM3T-2415S	AM3T-2415SH35		15VDC	200mA
AM3T-2418S	AM3T-2418SH35		18VDC	167mA
AM3T-2424S	AM3T-2424SH35		24VDC	125mA
AM3T-4803S	AM3T-4803SH35	36VDC - 72VDC	3.3VDC	800mA
AM3T-4805S	AM3T-4805SH35		5VDC	600mA
AM3T-4807S	AM3T-4807SH35		7.2VDC	417mA
AM3T-4809S	AM3T-4809SH35		9VDC	333mA
AM3T-4812S	AM3T-4812SH35		12VDC	250mA
AM3T-4815S	AM3T-4815SH35		15VDC	200mA
AM3T-4818S	AM3T-4818SH35		18VDC	167mA
AM3T-4824S	AM3T-4824SH35		24VDC	125mA

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MODELS
Dual output

Models		Input Voltage	Ouput Voltage	Ouput Current max.
Isolation 1500VDC	Isolation 3500VDC			
AM3T-1203D	AM3T-1203DH35	9VDC - 18VDC	±3.3VDC	±400mA
AM3T-1205D	AM3T-1205DH35		±5VDC	±300mA
AM3T-1207D	AM3T-1207DH35		±7.2VDC	±208mA
AM3T-1209D	AM3T-1209DH35		±9VDC	±167mA
AM3T-1212D	AM3T-1212DH35		±12VDC	±125mA
AM3T-1215D	AM3T-1215DH35		±15VDC	±100mA
AM3T-1218D	AM3T-1218DH35		±18VDC	±84mA
AM3T-1224D	AM3T-1224DH35		±24VDC	±63mA
AM3T-2403D	AM3T-2403DH35	18VDC - 36VDC	±3.3VDC	±400mA
AM3T-2405D	AM3T-2405DH35		±5VDC	±300mA
AM3T-2407D	AM3T-2407DH35		±7.2VDC	±208mA
AM3T-2409D	AM3T-2409DH35		±9VDC	±167mA
AM3T-2412D	AM3T-2412DH35		±12VDC	±125mA
AM3T-2415D	AM3T-2415DH35		±15VDC	±100mA
AM3T-2418D	AM3T-2418DH35		±18VDC	±84mA
AM3T-2424D	AM3T-2424DH35		±24VDC	±63mA
AM3T-4803D	AM3T-4803DH35	36VDC - 72VDC	±3.3VDC	±400mA
AM3T-4805D	AM3T-4805DH35		±5VDC	±300mA
AM3T-4807D	AM3T-4807DH35		±7.2VDC	±208mA
AM3T-4809D	AM3T-4809DH35		±9VDC	±167mA
AM3T-4812D	AM3T-4812DH35		±12VDC	±125mA
AM3T-4815D	AM3T-4815DH35		±15VDC	±100mA
AM3T-4818D	AM3T-4818DH35		±18VDC	±84mA
AM3T-4824D	AM3T-4824DH35		±24VDC	±63mA