

8 watt dc-dc converters

- 24PIN DIP PACKAGE
- METAL ENCAPSULATED CASE
- POWER MODULES FOR PCB MOUNTING
- 2:1 WIDE INPUT RANGE
- REGULATED OUTPUT
- LOW RIPPLE & NOISE
- OPERATING TEMPERATURE : -40...+75°C

GENERAL DESCRIPTION

Our AM8T-I series is a family of cost effective 8W single and dual output DC-DC converters. These converters are DIP24 compatible metal case with dimensions of 31.8x20.3x10.2mm. The high performance features of our AM8T-I components include continuous short circuit protection with auto recovery, tight line regulation and a high efficiency operation coefficient up to 86%.

Twenty eight models operate from an input voltage range of 5, 12, 24 & 48VDC producing output voltages of 3.3, 5, 12, 15, ± 5 , ± 12 & ± 15 VDC. The normal operation is specified over the full operating temperature range of -40°C to +75°C with no derating required. Cooling is done by free air convection.

ELECTRICAL SPECIFICATIONS

All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Input Specifications:

Voltage range	12VDC, 9~18VDC 24VDC, 18~36VDC 48VDC, 36~75VDC
Filter	π (Pi) Network

Isolation Specifications:

Rated voltage	1500VDC
Resistance	>1000 Mohms
Capacitance	1000pF, typ.

General Specifications:

Efficiency	75% to 86%
Switching frequency	300KHz, typ. 100% load

Environmental Specifications:

Operating temperature	-40°C ...+75°C
Storage temperature	-55°C ...+105°C
Case temperature	+95°C, max.
Humidity (non-condensing)	Up to 95%
Cooling	Free-air convection

Output Specifications:

Voltage accuracy	$\pm 2\%$, max.
Ripple Noise (3.3,5V)	80m Vp-pmax
Ripple Noise other	1% P-P max
Short circuit protection	Continuous, auto-recovery
Over load protection	Over 110% full load and recovers automatically
Over Voltage Protection	Zener diode clamp protection
Line regulation (HL-LL)	$\pm 0.5\%$, typ.
Load regulation (10-100%)	single $\pm 0.5\%$, max., dual $\pm 2\%$
Temperature coefficient	$\pm 0.05\%/^{\circ}\text{C}$, max.

Physical Specifications:

Dimensions	31.8x20.3x10.2mm, tolerance $\pm 0.5\text{mm}$ 1.25x0.8x0.4inches
Weight	18g
Case material	Nickel-Coated Copper

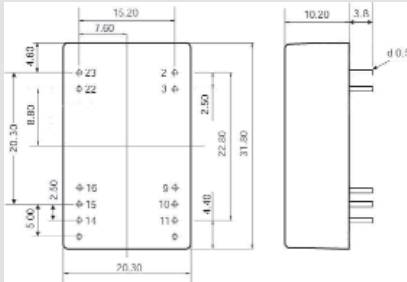
MTBF: > 800,000 hrs (MIL-HDBK-217F, Ground Benign, $t=+25^{\circ}\text{C}$)

Specifications are subject to change without notification

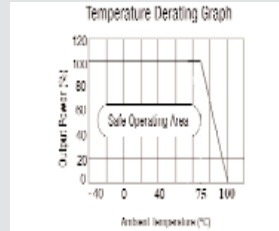
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OUTLINE DIMENSIONS & PIN CONNECTIONS

MECHANICAL DIMENSION (Bottom View)



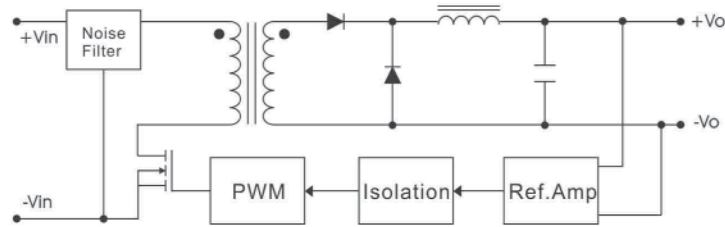
DERATING



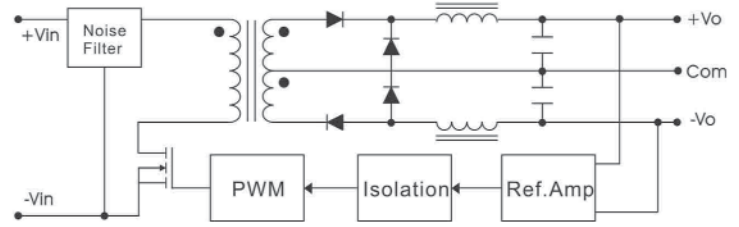
Pin	1500VDC	
	Single	Dual
2	-V Input	-V Input
3	-V Input	-V Input
9	N.C.	Common
10	N.C.	N.C.
11	N.C.	-V Output
14	+V Output	+V Output
15	N.C.	N.C.
16	-V Output	Common
22	+V Input	+V Input
23	+V Input	+V Input

BLOCK DIAGRAM

Single Output



Dual Output



MODELS Single output

Models	Input Voltage	Output Voltage	Output Current max.
AM8T-0503SI	4.5-9VDC	3.3VDC	1600mA
AM8T-0505SI		5VDC	1600mA
AM8T-0512SI		12VDC	660mA
AM8T-0515SI		5VDC	530mA
AM8T-1203SI	9-18VDC	3.3VDC	1600mA
AM8T-1205SI		5VDC	1600mA
AM8T-1212SI		12VDC	660mA
AM8T-1215SI		15VDC	530mA
AM8T-2403SI	18-36VDC	3.3VDC	1600mA
AM8T-2405SI		5VDC	1600mA
AM8T-2412SI		12VDC	660mA
AM8T-2415SI		15VDC	530mA
AM8T-4803SI	36-75VDC	3.3VDC	1600mA
AM8T-4805SI		5VDC	1600mA
AM8T-4812SI		12VDC	660mA
AM8T-4815SI		15VDC	530mA

MODELS Dual output

Models	Input Voltage	Ouput Voltage	Ouput Current max.
AM8T-0505DI	4.5-9VDC	±5VDC	±800mA
AM8T-0512DI		±12VDC	±330mA
AM8T-0515DI		±15VDC	±260mA
AM8T-1205DI	9-18VDC	±5VDC	±800mA
AM8T-1212DI		±12VDC	±330mA
AM8T-1215DI		±15VDC	±260mA
AM8T-2405DI	18-36VDC	±5VDC	±800mA
AM8T-2412DI		±12VDC	±330mA
AM8T-2415DI		±15VDC	±260mA
AM8T-4805DI	36-75VDC	±5VDC	±800mA
AM8T-4812DI		±12VDC	±330mA
AM8T-4815DI		±15VDC	±260mA