

3 watt dc-dc converters

- REGULATED SINGLE OUTPUT
- 12 PIN SIP PACKAGE
- LOW RIPPLE & NOISE
- HIGH EFFICIENCY UP TO 70%
- INPUT/OUTPUT ISOLATION: 1000, 3000 & 5200VDC
- OPERATING TEMPERATURE: -25°C ... +71°C
- PIN-COMPATIBLE WITH MULTIPLE MANUFACTURERS

GENERAL DESCRIPTION

Our AM3F series is a family of cost effective 3W single output DC-DC converters. These converters combine miniature package in a 12-pin SIP compatible case with high performance features such as 1000, 3000 & 5200VDC input/output isolation voltage, continuous short circuit protection with automatic restart and tight line / load regulation. Seventy two models operate from input voltages of 5, 12 & 24VDC with producing output voltage levels of 3.3, 5, 7.2, 9, 12, 15, 18, 24VDC.

High performance features include high efficiency operation up to 70% and output voltage accuracy of $\pm 2\%$ maximum. Standard features include an input range of $\pm 10\%$ tolerance and low output noise and ripple. All models are package in a low profile 31.80x8.60x13.47mm 12 pin SIP non-conductive black plastic case. Operation is specified over the full operating temperature range of -25°C to +71°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	$\pm 10\%$
Filter	p (Pi) Network

Isolation Specifications:

Rated voltage (60 sec)	1000, 3000, 5200VDC
Resistance	> 1000MOhm
Capacitance	60pF, typ.

Output Specifications:

Voltage accuracy	$\pm 2\%$, max.
Ripple & noise (at 20MHz BW)	75mVp-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	$\pm 0.02\%/^{\circ}\text{C}$, typ.

General Specifications:

Efficiency	64% to 70%
Switching frequency	125KHz, typ. 100% load

Environmental Specifications:

Operating temperature (ambient)	-25°C ... +71°C
Storage temperature	-40°C ... +125°C
Case temperature	+90°C, max.
Derating	None required
Humidity (non-condensing)	Up to 90%
Cooling	Free-air Convection

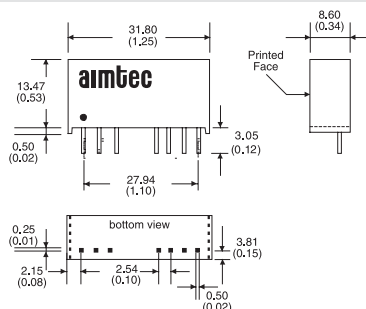
Physical Specifications:

Dimensions	31.80x8.60x13.47mm 1.25x0.34x0.53inches
Weight	10.7g
Case material	Non-conductive black plastic

MTBF: > 954,000 hrs (MIL-HDBK-217F, Ground Benign, $t=+25^{\circ}\text{C}$)

Specifications are subject to change without notification

OUTLINE DIMENSIONS & PIN CONNECTIONS



Pin	1000, 3000 & 5200VDC
	Single
1	+V Input
2	N.C.
3	N.C.
9	N.C.
10	-V output
11	+V output
12	-V input

AM3F Series

MODELS Single output

Models			Input Voltage	Output Voltage	Output Current max.
Isolation 1000VDC	Isolation 3000VDC	Isolation 5200VDC			
AM3F-0503S	AM3F-0503SH30	AM3F-0503SH52	5V±10%	3.3VDC	800mA
AM3F-0505S	AM3F-0505SH30	AM3F-0505SH52		5VDC	600mA
AM3F-0507S	AM3F-0507SH30	AM3F-0507SH52		7.2VDC	417mA
AM3F-0509S	AM3F-0509SH30	AM3F-0509SH52		9VDC	333mA
AM3F-0512S	AM3F-0512SH30	AM3F-0512SH52		12VDC	250mA
AM3F-0515S	AM3F-0515SH30	AM3F-0515SH52		15VDC	200mA
AM3F-0518S	AM3F-0518SH30	AM3F-0518SH52		18VDC	167mA
AM3F-0524S	AM3F-0524SH30	AM3F-0524SH52		24VDC	125mA
AM3F-1203S	AM3F-1203SH30	AM3F-1203SH52	12V±10%	3.3VDC	800mA
AM3F-1205S	AM3F-1205SH30	AM3F-1205SH52		5VDC	600mA
AM3F-1207S	AM3F-1207SH30	AM3F-1207SH52		7.2VDC	417mA
AM3F-1209S	AM3F-1209SH30	AM3F-1209SH52		9VDC	333mA
AM3F-1212S	AM3F-1212SH30	AM3F-1212SH52		12VDC	250mA
AM3F-1215S	AM3F-1215SH30	AM3F-1215SH52		15VDC	200mA
AM3F-1218S	AM3F-1218SH30	AM3F-1218SH52		18VDC	167mA
AM3F-1224S	AM3F-1224SH30	AM3F-1224SH52		24VDC	125mA
AM3F-2403S	AM3F-2403SH30	AM3F-2403SH52	24V±10%	3.3VDC	800mA
AM3F-2405S	AM3F-2405SH30	AM3F-2405SH52		5VDC	600mA
AM3F-2407S	AM3F-2407SH30	AM3F-2407SH52		7.2VDC	417mA
AM3F-2409S	AM3F-2409SH30	AM3F-2409SH52		9VDC	333mA
AM3F-2412S	AM3F-2412SH30	AM3F-2412SH52		12VDC	250mA
AM3F-2415S	AM3F-2415SH30	AM3F-2415SH52		15VDC	200mA
AM3F-2418S	AM3F-2418SH30	AM3F-2418SH52		18VDC	167mA
AM3F-2424S	AM3F-2424SH30	AM3F-2424SH52		24VDC	125mA