

3 watt dc-dc converters

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

GENERAL DESCRIPTION

The AM3F series is a family of cost effective 3W single output DC-DC converters. These converters combine miniature package in a 12-pin SIL compatible case with high performance features such as 1000VDC, 3000VDC or 5200VDC input/output isolation voltage, continuous short circuit protection with automatic restart and tight line / load regulation. Input bus voltage of 5, 12 and 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 31.80x8.60x13.97mm 12 pin SIL 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

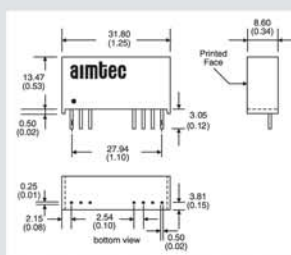
Specifications typical at +25°C, nominal input voltage, rated output current unless otherwise specified

Input Specifications:		General Specifications:	
Voltage range	$\pm 10\%$	Efficiency	64% to 70%
Filter	π (Pi) Network	Switching frequency	125KHz, typ
Isolation Specifications:		Environmental Specifications:	
Rated voltage (60 sec)	1000, 3000, 5200VDC	Operating temperature (ambient)	-25°C ... +71°C
Leakage current	1mA	Storage temperature	-40°C ... +125°C
Resistance	> 1000M Ω	Derating	None required
Capacitance	60pF, typ	Humidity (non-condensing)	Up to 90%
Output Specifications:		Cooling	Free-air Convection
Voltage accuracy	$\pm 2\%$, max	Physical Specifications	
Ripple and noise (at 20MHz BW)	75mVp-p, max	Dimensions	31.80x8.60x13.97mm
Short circuit protection	Continuous		1.25x0.34x0.55inches
Short circuit restart	Automatic	Weight	10.7g
Line voltage regulation	$\pm 0.5\%$, max	Case material	Non-conductive black plastic
Load voltage regulation	$\pm 0.5\%$, max		
Temperature coefficient	$\pm 0.02\%/^{\circ}\text{C}$		

MTBF: > 954 000 hrs (MIL-HDBK-217F, Ground Benign, t=+25°C)

Specifications are subject to change without notification

OUTLINE DIMENSIONS & PIN CONNECTIONS



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

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

INPUT CURRENT

No Load / Full Load

5 Vin models	65 / 910mA, typ
12 Vin models	37 / 377mA, typ
24 Vin models	25 / 192mA, typ