



1 watt dc-dc converters

- 4PIN SIL PACKAGE
- LOW RIPPLE AND NOISE
- HIGH EFFICIENCY UP TO 80%
- INPUT/OUTPUT ISOLATION: 1000 or 3000VDC
- OPERATING TEMPERATURE: -40°C ... +85°C
- PIN-COMPATIBLE WITH OTHER MANUFACTURERS

GENERAL DESCRIPTION

The AM1S series is a family of cost effective 1W single output isolated DC-DC converters. These converters achieve low cost and ultra-miniature SIL4 pin size without compromising performance and reliability. Forty eight models operate from

input voltage 5, 12 and 24VDC; producing output voltage levels of 3.3, 5, 7.2, 9, 12, 15, 18, 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:

Voltage range	±10%
Filter	Capacitor

Isolation Specifications:

Rated voltage	1000VDC 3000VDC
Leakage current	1mA
Resistance	> 1000MΩ
Capacitance	60pF, typ

Output Specifications:

Voltage accuracy	±5%, max
Ripple and noise (at 20MHz BW)	100mVp-p, max
Short circuit protection	Momentary
Line voltage regulation	±1.2% / 1.0% of Vin
Load voltage regulation	±8%, load=20~100%
Temperature coefficient	±0.02%/°C

General Specifications:

Efficiency	71% to 80%
Switching frequency	80KHz, typ

Environmental Specifications:

Operating temperature (ambient)	-40°C ... +85°C
Storage temperature	-55°C ... +125°C
Derating	None required
Humidity (non-condensing)	Up to 90%
Cooling	Free-air Convection

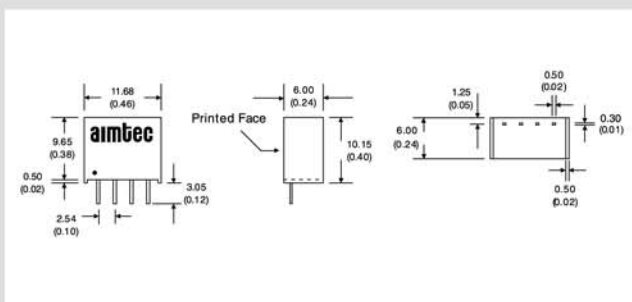
Physical Specifications

Dimensions	11.68x6.00x10.15mm 0.46x0.24x0.40inches
Weight	1.8g
Case material	Non-conductive black plastic

MTBF: >1 191 000 hrs (MIL-HDBK-217F, Ground Benign, t=+25°C)

Specifications are subject to change without notification

OUTLINE DIMENSIONS & PIN CONNECTIONS



Pin	1000, 3000VDC
	Single
1	-V input
2	+V input
3	-V output
4	+V output

MODELS

Single output

Models		Input voltage	Output voltage	Output current max.
Isolation 1000VDC	Isolation 3000VDC			
AM1S-0503S	AM1S-0503SH30	5V±10%	3.3VDC	300mA
AM1S-0505S	AM1S-0505SH30		5VDC	200mA
AM1S-0507S	AM1S-0507SH30		7.2VDC	140mA
AM1S-0509S	AM1S-0509SH30		9VDC	110mA
AM1S-0512S	AM1S-0512SH30		12VDC	83mA
AM1S-0515S	AM1S-0515SH30		15VDC	67mA
AM1S-0518S	AM1S-0518SH30		18VDC	56mA
AM1S-0524S	AM1S-0524SH30		24VDC	42mA
AM1S-1203S	AM1S-1203SH30	12V±10%	3.3VDC	300mA
AM1S-1205S	AM1S-1205SH30		5VDC	200mA
AM1S-1207S	AM1S-1207SH30		7.2VDC	140mA
AM1S-1209S	AM1S-1209SH30		9VDC	110mA
AM1S-1212S	AM1S-1212SH30		12VDC	83mA
AM1S-1215S	AM1S-1215SH30		15VDC	67mA
AM1S-1218S	AM1S-1218SH30		18VDC	56mA
AM1S-1224S	AM1S-1224SH30		24VDC	42mA
AM1S-2403S	AM1S-2403SH30	24V±10%	3.3VDC	300mA
AM1S-2405S	AM1S-2405SH30		5VDC	200mA
AM1S-2407S	AM1S-2407SH30		7.2VDC	140mA
AM1S-2409S	AM1S-2409SH30		9VDC	110mA
AM1S-2412S	AM1S-2412SH30		12VDC	83mA
AM1S-2415S	AM1S-2415SH30		15VDC	67mA
AM1S-2418S	AM1S-2418SH30		18VDC	56mA
AM1S-2424S	AM1S-2424SH30		24VDC	42mA

INPUT CURRENT

No Load / Full Load

5 Vin models	25 / 259mA, typ
12 Vin models	16 / 128mA, typ
24 Vin models	8 / 53mA, typ