Series AM1SS-Z

1 Watt | DC-DC Converter



FEATURES:

- RoHS compliant
- 4 Pin SIP Package
- Low ripple and noise
- High efficiency up to 76%
- Operating temperature -40°C to +85°C
- Input / output isolation 1000 and 3000VDC
- Pin compatible with multiple manufacturers
- Continuous short circuit protection

RoHS

Models

Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Efficiency (%)
AM1SS-0505SZ	4.5-5.5	5	200	1000	74
AM1SS-0512SZ	4.5-5.5	12	83	1000	75
AM1SS-0515SZ	4.5-5.5	15	67	1000	75
AM1SS-1205SZ	10.8-13.2	5	200	1000	74
AM1SS-1212SZ	10.8-13.2	12	83	1000	75
AM1SS-1215SZ	10.8-13.2	15	67	1000	75
AM1SS-2405SZ	21.6-26.4	5	200	1000	74
AM1SS-2412SZ	21.6-26.4	12	83	1000	75
AM1SS-2415SZ	21.6-26.4	15	67	1000	76
AM1SS-0505SH30Z	4.5-5.5	5	200	3000	74
AM1SS-0512SH30Z	4.5-5.5	12	83	3000	75
AM1SS-0515SH30Z	4.5-5.5	15	67	3000	75
AM1SS-1205SH30Z	10.8-13.2	5	200	3000	74
AM1SS-1212SH30Z	10.8-13.2	12	83	3000	75
AM1SS-1215SH30Z	10.8-13.2	15	67	3000	75
AM1SS-2405SH30Z	21.6-26.4	5	200	3000	74
AM1SS-2412SH30Z	21.6-26.4	12	83	3000	75
AM1SS-2415SH30Z	21.6-26.4	15	67	3000	76

NOTE: All specifications are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	5 12 24	4.5-5.5 10.8-13.2 21.6-26.4		VDC
Filter		Capacitor		
Turn on Transient process time			25	ms
Start up time		200		ms
Absolute Maximum Rating	5 Vin 12 Vin 24 Vin	0-7 0-15 0-28		VDC
Peak Input Voltage time		100		ms
Input reflected Ripple current	With 12µH	20		mA p-p

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	3 sec		1000 and 3000	VDC
Resistance		> 1000		MOhm
Capacitance		10		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±3		%
Short Circuit protection		Continuous		

Output Specifications (continued)

Parameters	Conditions	Typical	Maximum	Units
Short circuit restart		Auto-Recovery		
Line voltage regulation	For 1% change of Vin	±1.2		% of Vin
Load voltage regulation	Load 20 – 100%	±10		%
Temperature coefficient		±0.02		%/°C
Ripple & Noise	At 20MHz Bandwidth	100		mV p-p
Capacitive load			220	µF
Rising time		50		ms

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	80		KHz
Operating temperature	Full Load without Derating	-40 to +85		°C
Storage temperature		-40 to +125		°C
Max Case temperature			100	°C
Cooling		Free air convection		
Humidity			95	%
Case material		Non-conductive black plastic UL94-VO		
Weight		1.5		g
Dimensions (L x W x H)	0.46 x 0.24 x 0.40 inches 11.68 x 6.00 x 10.15 mm			
MTBF	>1 121 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			

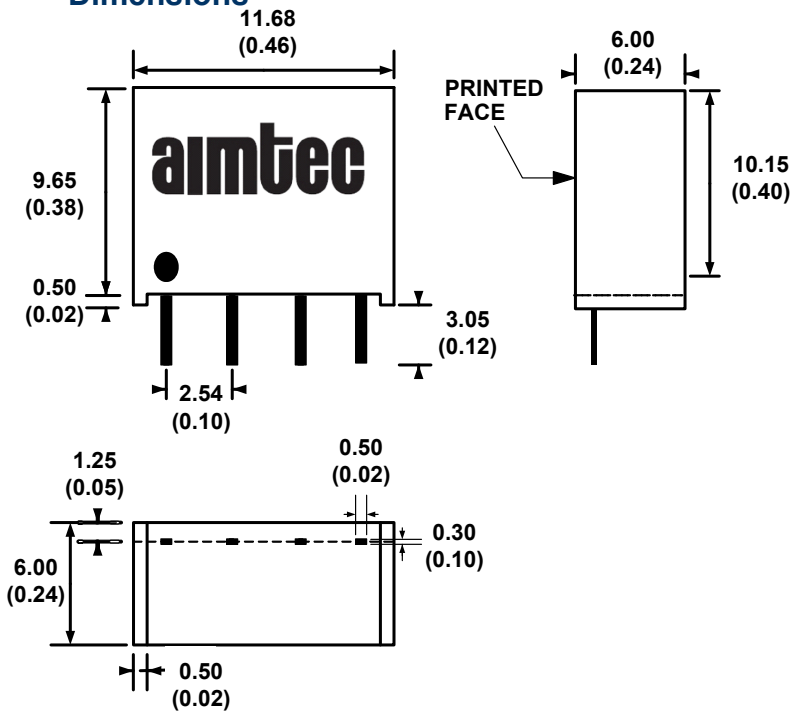
Safety Specifications

Standards	
Safety	IEC 60950-1 (Designed to meet)

Pin Out Specifications

Pin	Single
1	- V Input
2	+V Input
3	- V Output
4	+V Output

Dimensions



NOTE: 1. Datasheets are updated as needed and as such, specifications are subject to change without notice. Once printed or downloaded, datasheets are no longer controlled by Aimtec; refer to www.aimtec.com for the most current product specifications. **2.** Product labels shown, including safety agency certifications on labels, may vary based on the date manufactured. **3.** Mechanical drawings and specifications are for reference only. **4.** All specifications are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified. **5.** Aimtec may not have conducted destructive testing or chemical analysis on all internal components and chemicals at the time of publishing this document. CAS numbers and other limited information are considered proprietary and may not be available for release. **6.** This product is not designed for use in critical life support systems, equipment used in hazardous environments, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other the ones listed in this datasheet. **7.** Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.