Series AM1PS-Z
1 Watt | DC-DC Converter



FEATURES:

- RoHS compliant
- 8 Pin DIP Package
- Low ripple and noise
- High Efficiency up to 76%
- Operating temperature -40°C to + 85°C
- Input / Output Isolation 1000 & 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 (%)
AM1PS-0505SZ	4.5-5.5	5	200	1000	74
AM1PS-0512SZ	4.5-5.5	12	83	1000	75
AM1PS-0515SZ	4.5-5.5	15	67	1000	75
AM1PS-1205SZ	10.8-13.2	5	200	1000	74
AM1PS-1212SZ	10.8-13.2	12	83	1000	75
AM1PS-1215SZ	10.8-13.2	15	67	1000	75
AM1PS-2405SZ	21.6-26.4	5	200	1000	74
AM1PS-2412SZ	21.6-26.4	12	83	1000	75
AM1PS-2415SZ	21.6-26.4	15	67	1000	76
AM1PS-0505SH30Z	4.5-5.5	5	200	3000	74
AM1PS-0512SH30Z	4.5-5.5	12	83	3000	75
AM1PS-0515SH30Z	4.5-5.5	15	67	3000	75
AM1PS-1205SH30Z	10.8-13.2	5	200	3000	74
AM1PS-1212SH30Z	10.8-13.2	12	83	3000	75
AM1PS-1215SH30Z	10.8-13.2	15	67	3000	75
AM1PS-2405SH30Z	21.6-26.4	5	200	3000	74
AM1PS-2412SH30Z	21.6-26.4	12	83	3000	75
AM1PS-2415SH30Z	21.6-26.4	15	67	3000	76

Models
Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Efficiency (%)
AM1PS-0505DZ	4.5-5.5	±5	±100	1000	70
AM1PS-0512DZ	4.5-5.5	±12	±42	1000	73
AM1PS-0515DZ	4.5-5.5	±15	±33	1000	73
AM1PS-1205DZ	10.8-13.2	±5	±100	1000	71
AM1PS-1212DZ	10.8-13.2	±12	±42	1000	73
AM1PS-1215DZ	10.8-13.2	±15	±33	1000	74
AM1PS-2405DZ	21.6-26.4	±5	±100	1000	71
AM1PS-2412DZ	21.6-26.4	±12	±42	1000	74
AM1PS-2415DZ	21.6-26.4	±15	±33	1000	74
AM1PS-0505DH30Z	4.5-5.5	±5	±100	3000	70
AM1PS-0512DH30Z	4.5-5.5	±12	±42	3000	73
AM1PS-0515DH30Z	4.5-5.5	±15	±33	3000	73
AM1PS-1205DH30Z	10.8-13.2	±5	±100	3000	71
AM1PS-1212DH30Z	10.8-13.2	±12	±42	3000	73
AM1PS-1215DH30Z	10.8-13.2	±15	±33	3000	74
AM1PS-2405DH30Z	21.6-26.4	±5	±100	3000	71
AM1PS-2412DH30Z	21.6-26.4	±12	±42	3000	74
AM1PS-2415DH30Z	21.6-26.4	±15	±33	3000	74

NOTE: All specifications in this datasheet 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	4.5-5.5		VDC
	12	10.8-13.2		
	24	21.6-26.4		
Filter		Capacitor		
Turn on Transient process time			25	ms
Start up time		200		ms
Absolute Maximum Rating	5 Vin	0-7		VDC
	12 Vin	0-15		
	24 Vin	0-28		
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 all models, 3000 (single output)	VDC
Resistance		> 1000		MOhm
Capacitance		10		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±3		%
Short Circuit protection		Continuous		
Short circuit restart		Auto-Recovery		
Line voltage regulation	For 1% change of Vin	±1.2		%
Load voltage regulation	Load 20 – 100%	±10		%
Temperature coefficient		±0.02		%/°C
Ripple & Noise	At 20MHz Bandwidth	100		mV p-p
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		
Weight		1.8		g
Dimensions (L x W x H)		0.50 x 0.40 x 0.27 inches 12.70 x 10.16 x 6.85 mm		
MTBF		>1 121 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)		

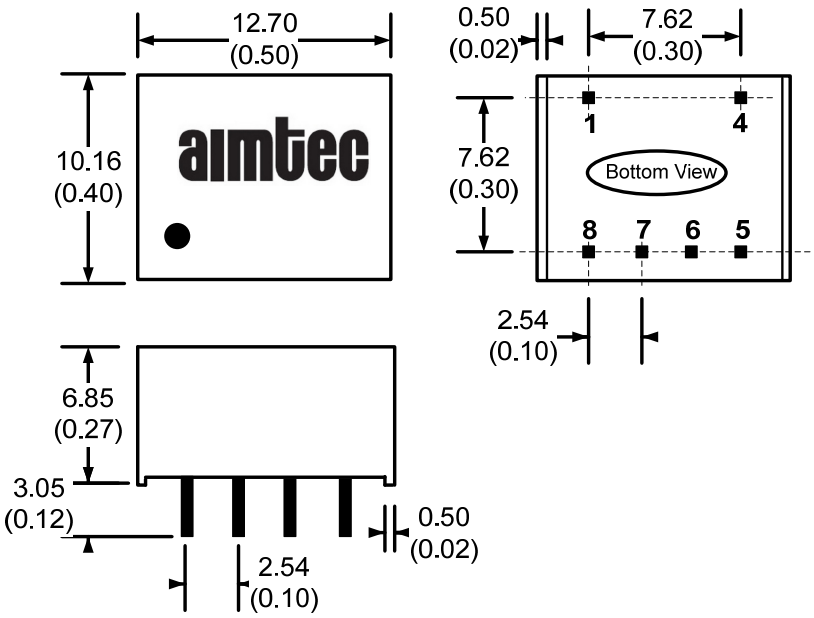
Safety Specifications

Parameters	
Standards	NOTE: Designed to meet IEC 60950-1

Pin Out Specifications

Pin	1000 and 3000 VDC	
	Single	Dual
1	- V Input	- V Input
4	+ V Input	+ V Input
5	+ V Output	+ V Output
6	No pin	No pin
7	- V Output	Common
8	No pin	- V Output

Dimensions



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