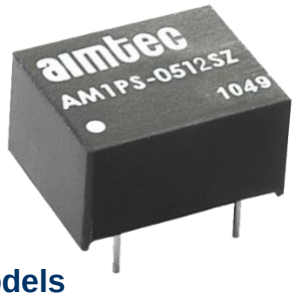
aimtec
Your Power Partner

Series AM1PS-Z

1 Watt | DC-DC Converter



FEATURES:

- RoHS Compliant
- 8 Pin Dip Package
- Low Ripple and Noise
- High Efficiency Up To 78%
- Operating Temperature -40°Cto +85°C
- Input / Output Isolation 1000 &3000 VDC
- 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)	Input Current Full Load | No Load (mA)		Max Capacitive Load (µF)	Efficiency (%)
AM1PS-0505SZ	4.5-5.5	5	200	1000	267	53	100	75
AM1PS-0512SZ	4.5-5.5	12	83.3	1000	270	48	100	74
AM1PS-0515SZ	4.5-5.5	15	66.6	1000	173	50	100	79
AM1PS-1205SZ	10.8-13.2	5	200	1000	110	20	100	76
AM1PS-1212SZ	10.8-13.2	12	83.3	1000	111	20	100	78
AM1PS-1215SZ	10.8-13.2	15	66.6	1000	111	30	100	79
AM1PS-2405SZ	21.6-26.4	5	200	1000	58	20	100	72
AM1PS-2412SZ	21.6-26.4	12	83.3	1000	56	15	100	74
AM1PS-2415SZ	21.6-26.4	15	66.6	1000	56	15	100	74
AM1PS-0505SH30Z	4.5-5.5	5	200	3000	267	53	100	75
AM1PS-0512SH30Z	4.5-5.5	12	83.3	3000	270	48	100	74
AM1PS-0515SH30Z	4.5-5.5	15	66.6	3000	173	50	100	79
AM1PS-1205SH30Z	10.8-13.2	5	200	3000	110	20	100	76
AM1PS-1212SH30Z	10.8-13.2	12	83.3	3000	111	20	100	78
AM1PS-1215SH30Z	10.8-13.2	15	66.6	3000	111	30	100	79
AM1PS-2405SH30Z	21.6-26.4	5	200	3000	58	20	100	72
AM1PS-2412SH30Z	21.6-26.4	12	83.3	3000	56	15	100	74
AM1PS-2415SH30Z	21.6-26.4	15	66.6	3000	56	15	100	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			
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 source inductance	20		mA p-p

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60sec		1000 and 3000	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

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load, Variable	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)			

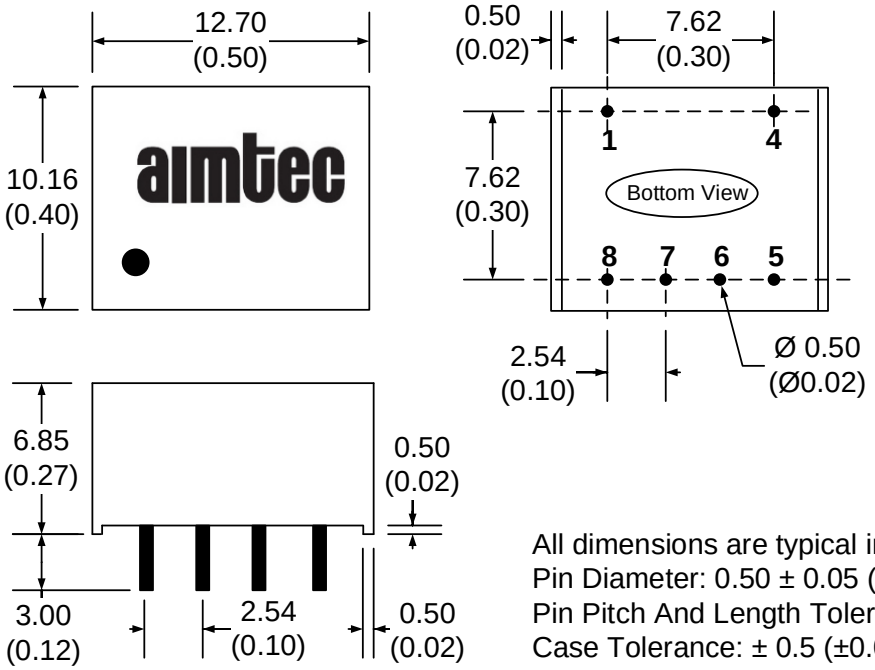
Safety Specifications

Parameters	
Standards	NOTE: Designed to meet IEC 60950-1

Pin Out Specifications

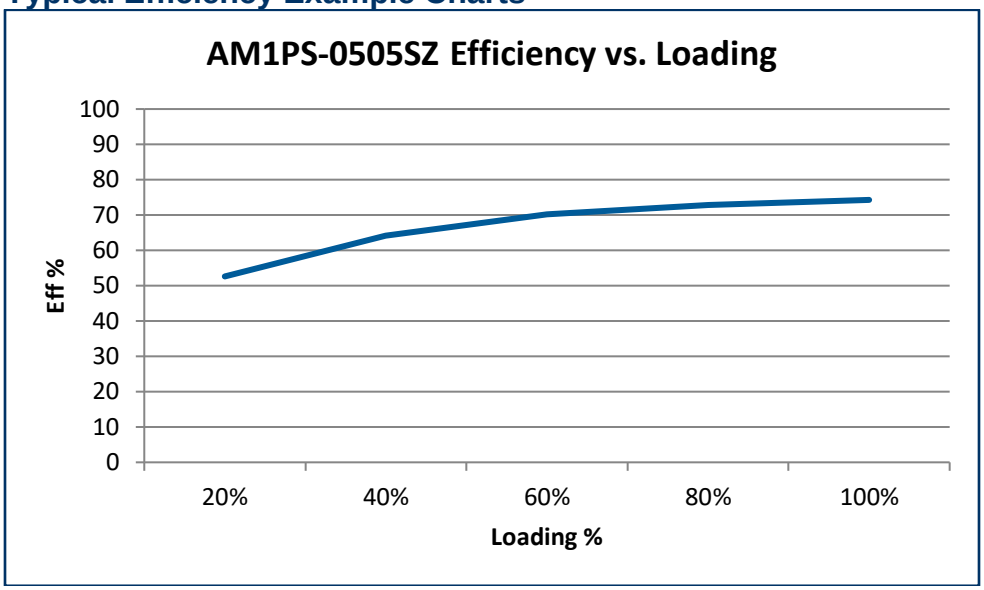
Pin	1000 and 3000 VDC	
	Single	Dual
1	- V Input	- V Input
4	+ V Input	+ V Input
5	+ V Output	+ V Output
6	No pin	No pin
7	- V Output	Common
8	No pin	- V Output

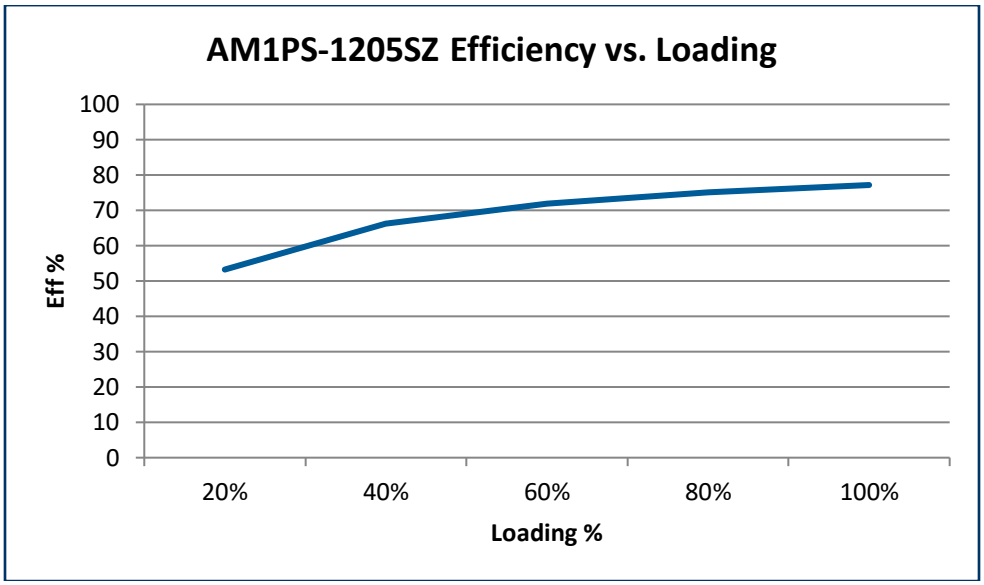
Dimensions

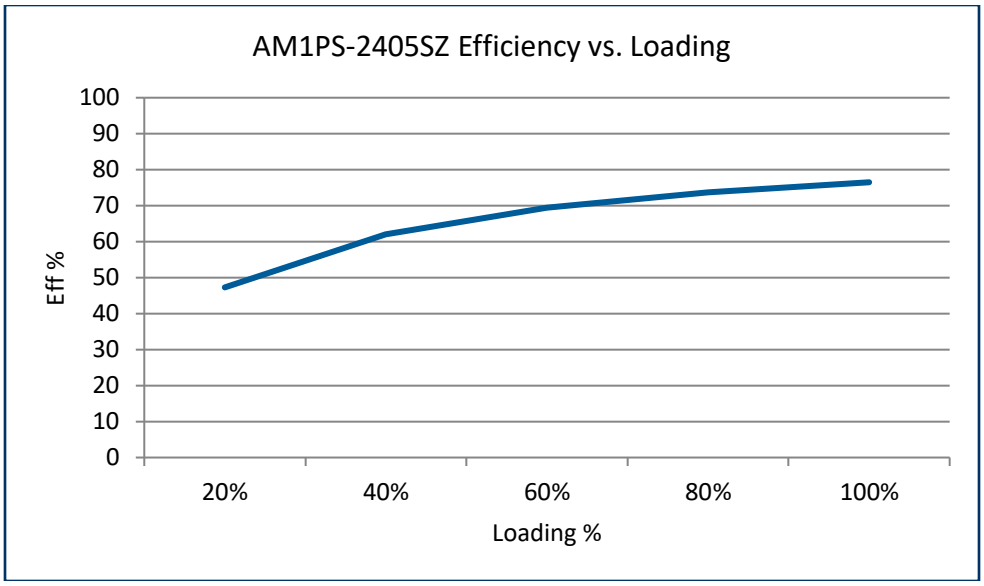


All dimensions are typical in millimeters (inches)
Pin Diameter: 0.50 ± 0.05 (0.02 ± 0.002)
Pin Pitch And Length Tolerance: ± 0.35 (±0.014)
Case Tolerance: ± 0.5 (±0.02)

Typical Efficiency Example Charts







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