aimtec
Your Power Partner

Series AM1SS-Z

1 Watt | DC-DC Converter



FEATURES:

- RoHS Compliant
- 4 Pin Sip Package
- Low Ripple And Noise
- High Efficiency up to 81%
- 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)	Input Current Full Load | No Load (mA)		Max Capacitive Load (µF)	Efficiency (%)
AM1SS-0505SZ	4.5-5.5	5	200	1000	267	55	100	75
AM1SS-0512SZ	4.5-5.5	12	83.3	1000	267	52	100	74
AM1SS-0515SZ	4.5-5.5	15	66.6	1000	173	50	100	79
AM1SS-1205SZ	10.8-13.2	5	200	1000	110	20	100	76
AM1SS-1212SZ	10.8-13.2	12	83.3	1000	107	23	100	78
AM1SS-1215SZ	10.8-13.2	15	66.6	1000	111	23	100	79
AM1SS-2405SZ	21.6-26.4	5	200	1000	54	15	100	79
AM1SS-2412SZ	21.6-26.4	12	83.3	1000	56	15	100	75
AM1SS-2415SZ	21.6-26.4	15	66.6	1000	51	12	100	81
AM1SS-0505SH30Z	4.5-5.5	5	200	3000	267	55	100	75
AM1SS-0512SH30Z	4.5-5.5	12	83.3	3000	267	52	100	74
AM1SS-0515SH30Z	4.5-5.5	15	66.6	3000	173	50	100	79
AM1SS-1205SH30Z	10.8-13.2	5	200	3000	110	20	100	76
AM1SS-1212SH30Z	10.8-13.2	12	83.3	3000	107	23	100	78
AM1SS-1215SH30Z	10.8-13.2	15	66.6	3000	111	23	100	79
AM1SS-2405SH30Z	21.6-26.4	5	200	3000	54	15	100	79
AM1SS-2412SH30Z	21.6-26.4	12	83.3	3000	56	15	100	75
AM1SS-2415SH30Z	21.6-26.4	15	66.6	3000	51	12	100	81

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	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			

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		%/ºC
Ripple & Noise	At 20MHz Bandwidth	100		mV p-p
Capacitive load			100	µF
Rising time		50		ms

General Specifications

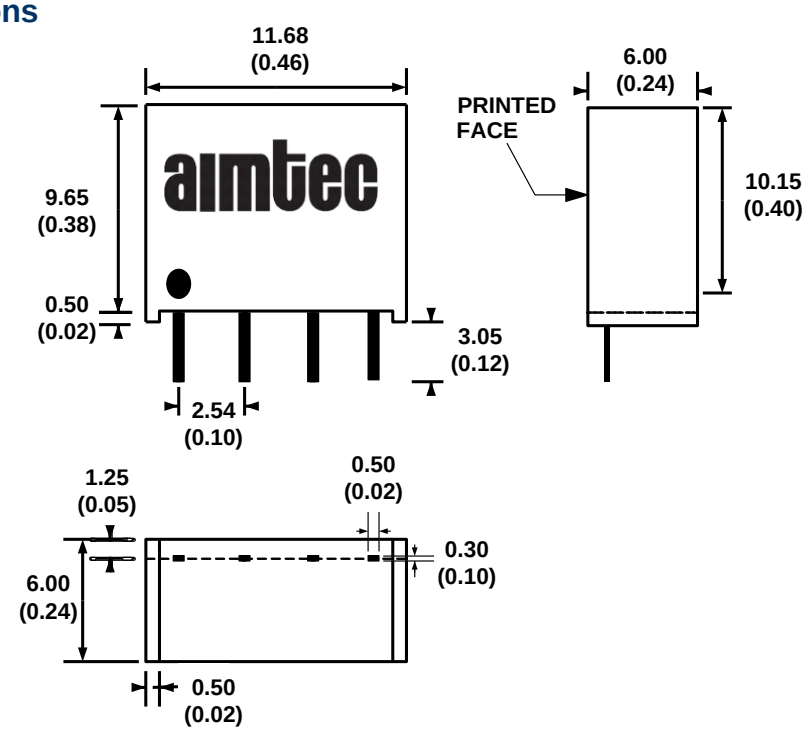
Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load , Variable	80		KHz
Operating temperature	Full Load without Derating	-40to +85		ºC
Storage temperature		-40 to +125		ºC
Max Case temperature			100	ºC
Cooling	Free air convection			
Humidity			95	%
Case material		Non-conductive black 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=+25ºC)			

Safety Specifications

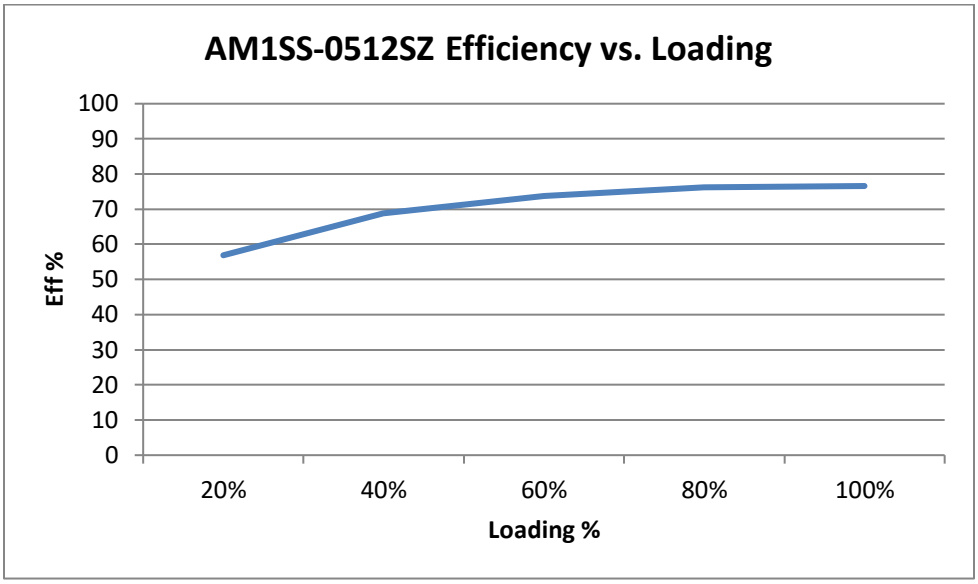
Standards	
Safety	IEC 60950-1 (Designed to meet)

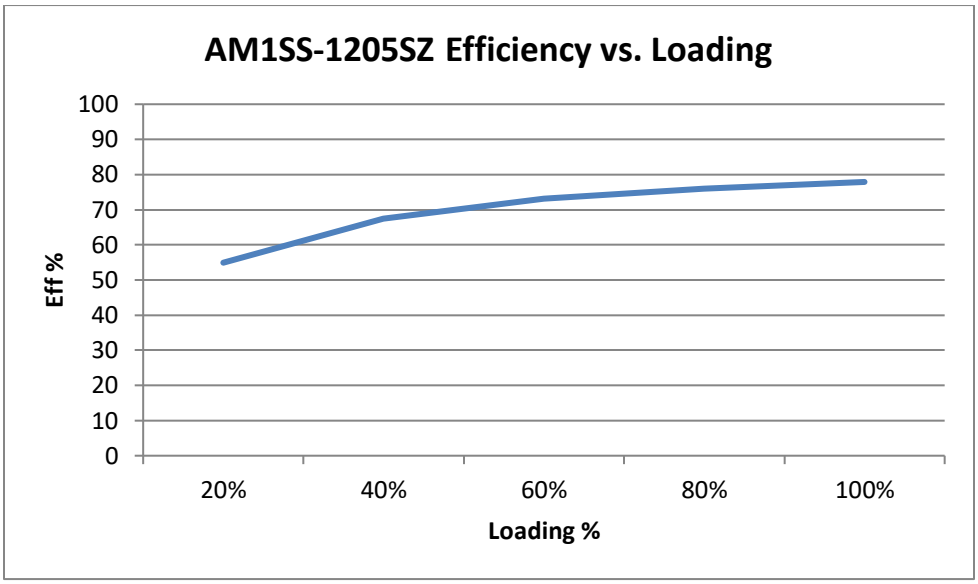
Pin Out SpecificationsDimensions

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



Typical Efficiency Example Charts


AM1SS-0512SZ Efficiency vs. Loading
100
90
80
70
60
50
40
30
20
10
0
Eff %
20%
40%
60%
80%
100%
Loading %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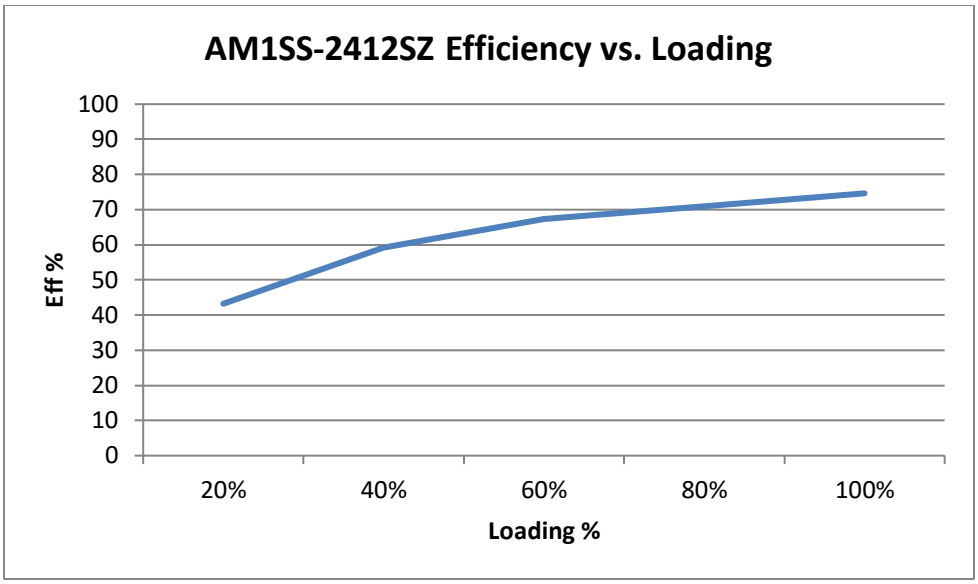

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