

## Series AM1SS-(J)NZ

1 Watt | DC-DC Converter



### FEATURES:

- Unregulated
- 4 Pin SIP Package
- Low ripple and noise
- High efficiency up to 82%
- Operating temperature -40°C to +105°C
- Input / Output isolation 1500 VDC
- Pin compatible with multiple manufacturers
- Continuous Short Circuit Protection ‡

### Models Single output



Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max. Capacitive Load (µF)	Efficiency (%)
AM1SS-0303S-NZ	2.97-3.63	3.3	303	1500	220	72
AM1SS-0305S-NZ	2.97-3.63	5	200	1500	220	76
AM1SS-0312S-NZ	2.97-3.63	12	84	1500	220	80
AM1SS-0503S-NZ	4.5-5.5	3.3	303	1500	220	72
AM1SS-0505S-NZ	4.5-5.5	5	200	1500	220	80
AM1SS-0505S-JZ	4.5-5.5	5	200	1500	2400	82
AM1SS-0509S-NZ	4.5-5.5	9	111	1500	220	80
AM1SS-0512S-NZ	4.5-5.5	12	84	1500	220	81
AM1SS-0515S-NZ	4.5-5.5	15	67	1500	220	81
AM1SS-0524S-NZ ‡	4.5-5.5	24	42	1500	220	81
AM1SS-1203S-NZ	10.8-13.2	3.3	303	1500	220	72
AM1SS-1205S-NZ	10.8-13.2	5	200	1500	220	80
AM1SS-1209S-NZ	10.8-13.2	9	110	1500	220	80
AM1SS-1212S-NZ	10.8-13.2	12	83	1500	220	81
AM1SS-1215S-NZ	10.8-13.2	15	67	1500	220	80
AM1SS-1224S-NZ	10.8-13.2	24	42	1500	220	80
AM1SS-1515S-NZ	13.5-16.5	15	67	1500	220	81
AM1SS-2403S-NZ	21.6-26.4	3.3	303	1500	220	72
AM1SS-2405S-NZ	21.6-26.4	5	200	1500	220	80
AM1SS-2409S-NZ	21.6-26.4	9	110	1500	220	80
AM1SS-2412S-NZ	21.6-26.4	12	83	1500	220	81
AM1SS-2415S-NZ	21.6-26.4	15	67	1500	220	82
AM1SS-2424S-NZ	21.6-26.4	24	42	1500	220	82

‡ With Momentary short circuit protection of 1 second

### Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	3.3	2.97-3.63		VDC
	5	4.5-5.5		
	12	10.8-13.2		
	15	13.5-16.5		
	24	21.6-26.4		
Absolute Max Rating (1 sec. max.)	3.3		5	VDC
	5		9	
	12		18	
	15		21	
Filter	24		30	
		Capacitor		

### Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		1500	VDC
Resistance		> 1000		MOhm
Capacitance		20		pF

## Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	See tolerance graph	±5		%
Short Circuit protection		Continuous, unless marked with ‡		
Line voltage regulation	For 1.0% Vin, 3.3V Model For 1.0% Vin, Other Model	±1.5 ±1.2		% of Vin
Load voltage regulation	Load 10 – 100%	12		%
Temperature coefficient		±0.03		%/°C
Ripple & Noise	At 20 MHz Bandwidth	60		m Vp-p

## General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	100-300		KHz
Operating temperature	Derating Above 85°C	-40 to +105		°C
Storage temperature		-55 to +125		°C
Maximum case temperature			125	°C
Cooling	Free air convection			
Humidity	Non condensing		95	%
Soldering Lead Temperature	1.5mm from Lead, for 10 Sec		300	°C
Case material	Plastic UL94-VO			
Weight		1.2		g
Weight for JZ parts		1.3		
Dimensions (L x H x W)		0.46 x 0.40x 0.24 inches		11.60 x 10.10 x 6.00 mm
MTBF	>3500K hrs(MIL-HDBK -217F, Ground Benign, t=+25°C)			

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.

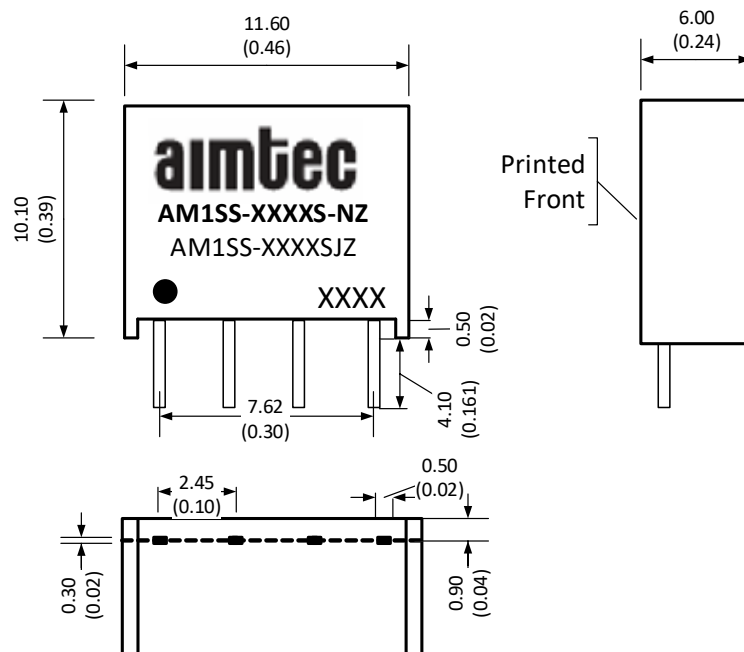
## Safety Specifications

Parameters	
Agency approvals	cULus (without 15V input and without 3.3V output models) (Also excluding parts with suffix JZ)
Standards	UL 60950-1

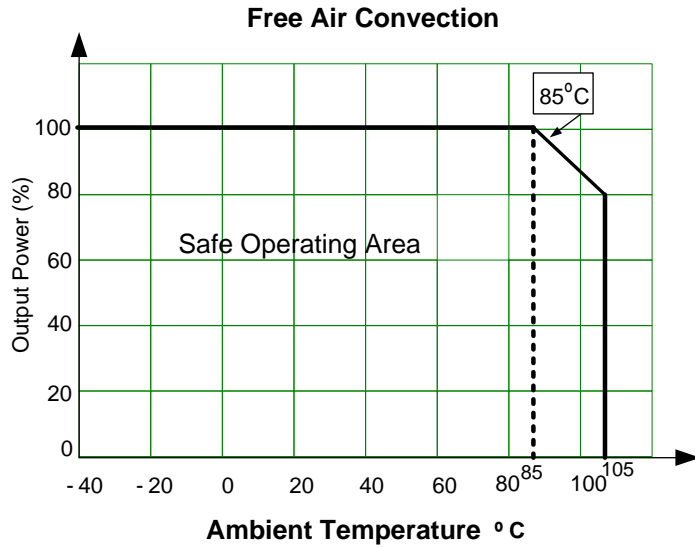
## Pin Out Specifications

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

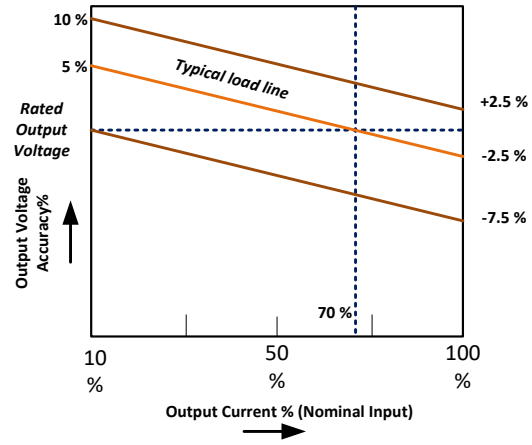
## Dimensions



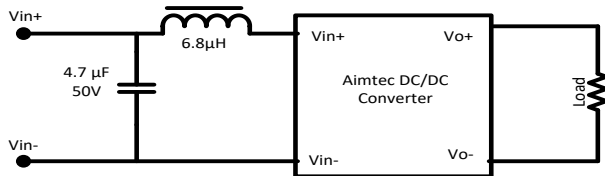
## Derating



## Typical Characteristics



## Recommended Circuit for EMI Class B



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