aimtec
Your Power Partner

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 -40ºC to +105ºC
- 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-0505SJZ	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 12 15 24		5 9 18 21 30	VDC
Filter	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		%/ºC
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 85ºC	-40 to +105		ºC
Storage temperature		-55 to +125		ºC
Maximum case temperature			125	ºC
Cooling	Free air convection			
Humidity	Non condensing		95	%
Soldering Lead Temperature	1.5mm from Lead, for 10 Sec		300	ºC
Case material	Plastic UL94-VO			
Weight Weight for JZ parts		1.2 1.3		g
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=+25ºC)			

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.

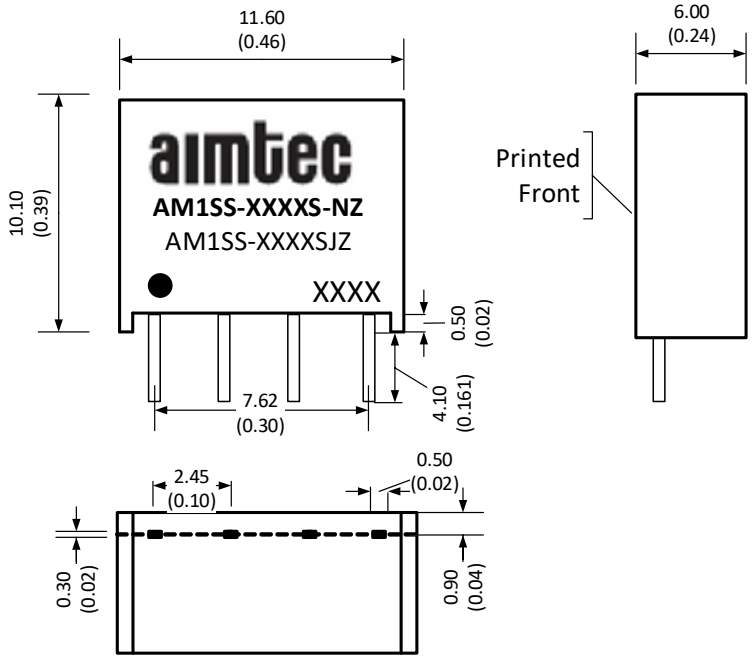
Safety Specifications

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

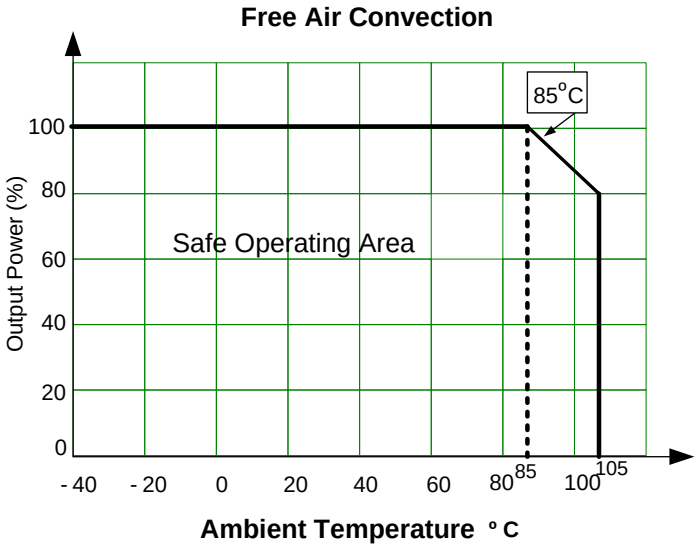
Pin Out Specifications

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

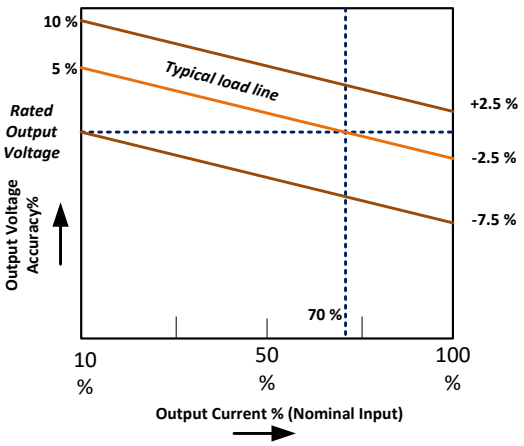
Dimensions



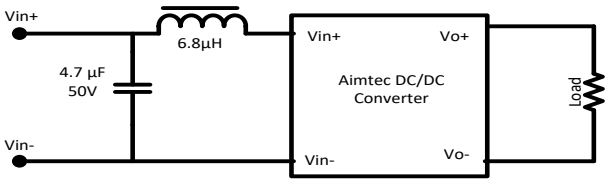
Derating



Typical Characteristics



Recommended Circuit for EMI Class B



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