

Series AM1/4SS-NZ

0.25 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 (%)
AM1/4SS-0303S-NZ	2.97-3.63	3.3	76	1500	220	74
AM1/4SS-0305S-NZ	2.97-3.63	5	50	1500	220	75
AM1/4SS-0503S-NZ	4.5-5.5	3.3	76	1500	220	74
AM1/4SS-0505S-NZ	4.5-5.5	5	50	1500	220	76
AM1/4SS-0512S-NZ	4.5-5.5	12	21	1500	220	77
AM1/4SS-1205S-NZ	10.8-13.2	5	50	1500	220	66
AM1/4SS-1505S-NZ	13.5-16.5	5	50	1500	220	66
AM1/4SS-2405S-NZ	21.6-26.4	5	50	1500	220	69
AM1/4SS-2409S-NZ	21.6-26.4	9	28	1500	220	66

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	
	24		30	
Filter	Capacitor			
Reflected Input ripple current	3.3 & 5V Input Others	20 5		mA p-p

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec, 1mA		1500	VDC
Resistance	I/O Isolation of 500VDC	> 1000		MOhm
Capacitance	100KHz/0.1V	20		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	See tolerance graph	±5		%
Short Circuit protection		Continuous, auto-recovery		
Line voltage regulation	For 1.0% Vin, 3.3V Model For 1.0% Vin, Others	±1.5 ±1.2		% of Vin
Load voltage regulation	Load 10 – 100%	12		%
Temperature coefficient		±0.02		%/°C
Ripple & Noise	At 20 MHz Bandwidth	60		m Vp-p

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	50-500		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
Dimensions (L x H x W)		0.46 x 0.40 x 0.24 inches	11.60 x 10.16 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.

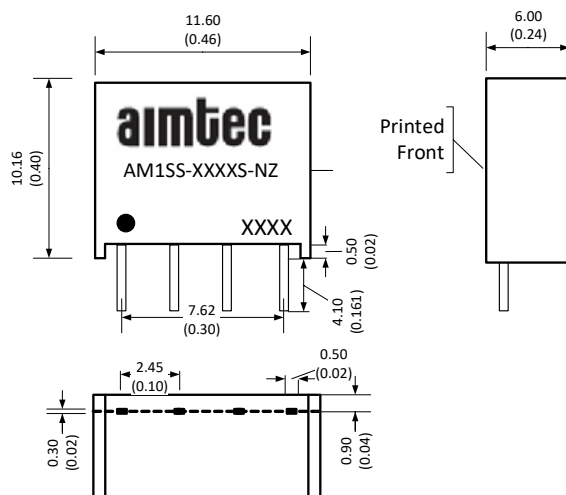
Safety Specifications

Parameters	
Standards	EN55022, class B (see recommended circuit) IEC61000-4-2: Contact ±8kV, Criteria B

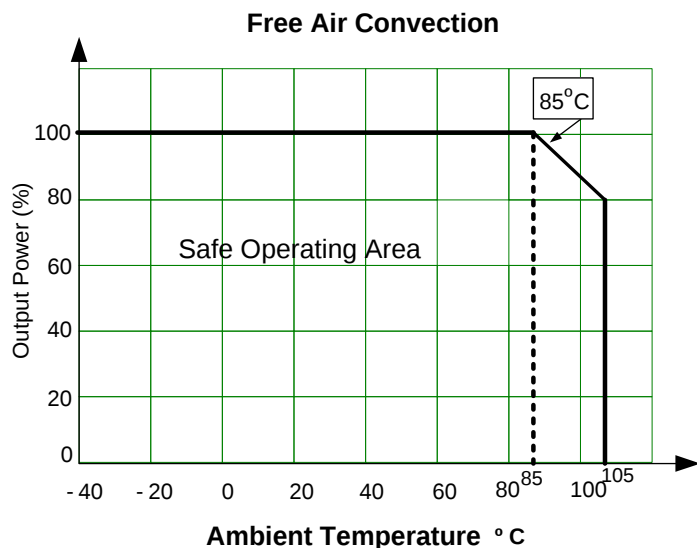
Pin Out Specifications

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

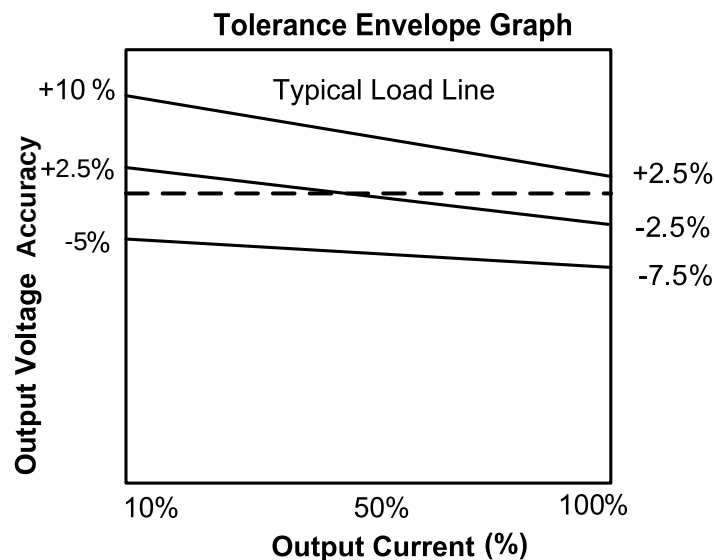
Dimensions



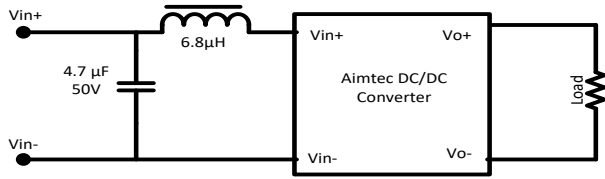
Derating



Typical Characteristics



Recommended Circuit for EMI Class B



NOTE: **1.** Datasheets are updated as needed and as such, specifications are subject to change without notice. Once printed or downloaded, datasheets are no longer controlled by Aimtec; refer to www.aimtec.com for the most current product specifications. **2.** Product labels shown, including safety agency certifications on labels, may vary based on the date manufactured. **3.** Mechanical drawings and specifications are for reference only. **4.** All specifications are measured at an ambient temperature of 25°C , humidity $<75\%$, nominal input voltage and at rated output load unless otherwise specified. **5.** Aimtec may not have conducted destructive testing or chemical analysis on all internal components and chemicals at the time of publishing this document. CAS numbers and other limited information are considered proprietary and may not be available for release. **6.** This product is not designed for use in critical life support systems, equipment used in hazardous environments, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other than the ones listed in this datasheet. **7.** Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.