

Series AM1SR-JZ

0.75 Watt | DC-DC Converter

FEATURES:

- Design to meet UL/EN 62368
- 4 Pin SIP Package
- 5mA low no load current
- High efficiency up to 74%
- Operating temperature -40°C to +85°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 / Min (mA)	Isolation (VDC)	Max. Capacitive Load (μF)	Efficiency (%)
AM1SR-0503SJZ	4.75-5.25	3.3	200 / 20	1500	2400	68
AM1SR-0505SJZ	4.75-5.25	5	150 / 15	1500	2400	72
AM1SR-0509SJZ	4.75-5.25	9	83 / 9	1500	1000	72
AM1SR-0512SJZ	4.75-5.25	12	62 / 7	1500	560	73
AM1SR-0515SJZ	4.75-5.25	15	50 / 5	1500	560	74

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	5	4.75-5.25		VDC
Input current (Full load/No load)	3.3VDC, 5VDC 9VDC, 12VDC 15VDC		221/10 221/20 215/30	mA
Filter	Capacitor			
Reflected ripple current		15		mA

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			±3	%
Short Circuit protection			Continuous	
Line voltage regulation	Input voltage: ±5%		±1.25	% of Vin
Load voltage regulation	Load 10 – 100% for 3.3V model Load 10 – 100% for other models		±3 ±2	%
Temperature coefficient		±0.02		%/°C
Ripple & Noise	At 20 MHz Bandwidth	30	75	mV p-p

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	270		KHz
Operating temperature	Derating Above 71°C		-40 to +85	°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		1.3		g
Dimensions (L x H x W)		0.46 x 0.4 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.

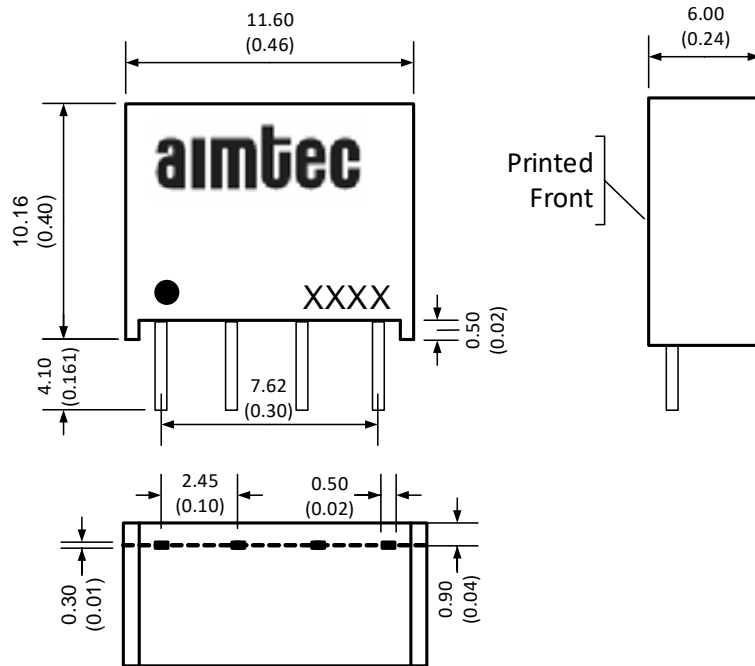
Safety Specifications

Parameters	
Agency approvals	Design to meet IEC/EN/UL62368, pending approval
Standards	CISPR32/EN55032 Class B, with the recommended circuit below
	IEC/EN 61000-4-2, Air +/-8kV, Contact +/-4kV, Criteria B

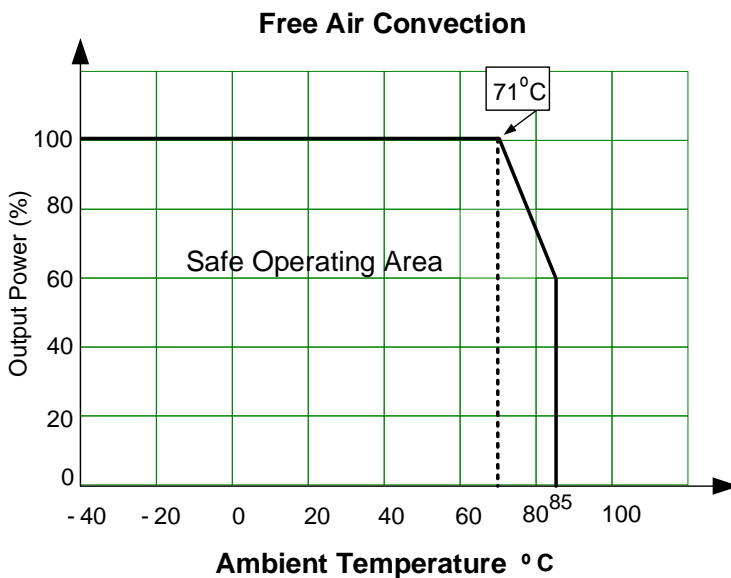
Pin Out Specifications

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

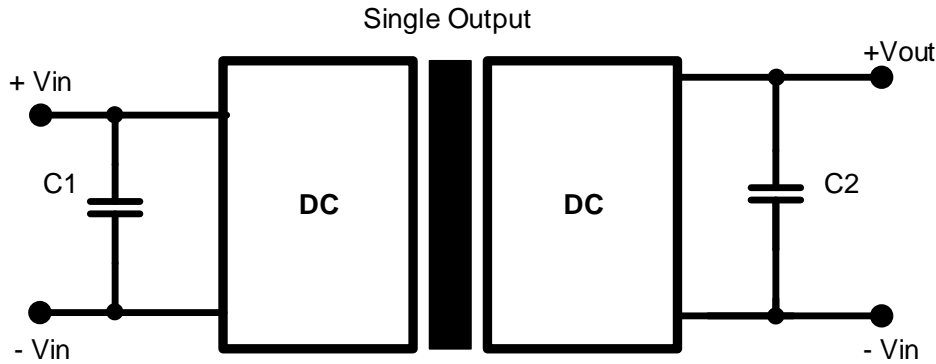
Dimensions



Derating

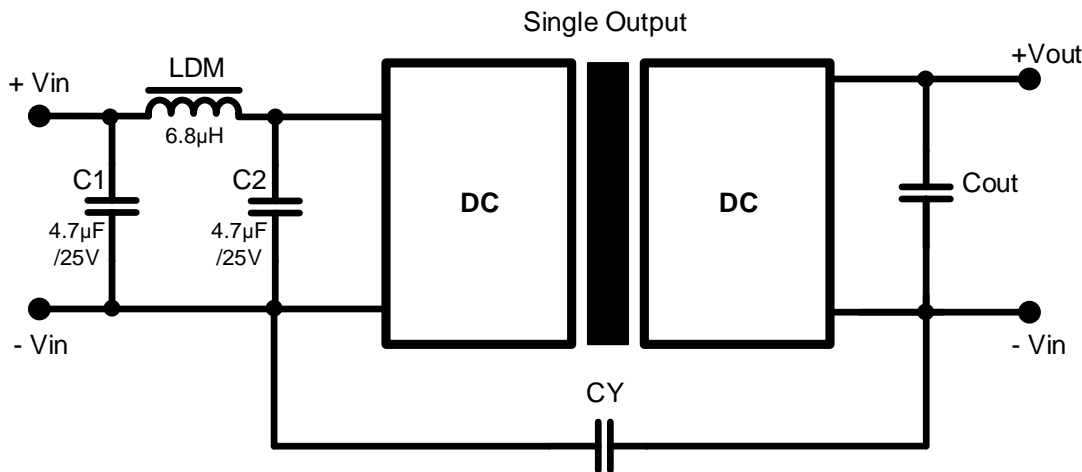


Typical Application Circuit



Vout	C1	C2
3.3V/5V	4.7 μ F	10 μ F
9V/12V	-	2.2 μ F
15V	-	1 μ F

Recommended EMI Circuit for Class B



Vout	CY	Cout
3.3V/5V/9V	-	Refer to C2 of typical application circuit
12V/15V	1nF/4KVDC, VISHAY HGZ102MBP TDK CD45-E2GA102M-GKA	

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.