aimtec
Your Power Partner

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 -40ºC to +85ºC
- Input / Output isolation 1500 VDC
- Pin compatible with multiple manufacturers
- Continuous Short Circuit Protection

RoHS

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		%/ºC
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 71ºC	-40 to +85		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		1.3		g
Dimensions (L x H x W)		0.46 x 0.4x 0.24 inches	11.60 x 10.16 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.

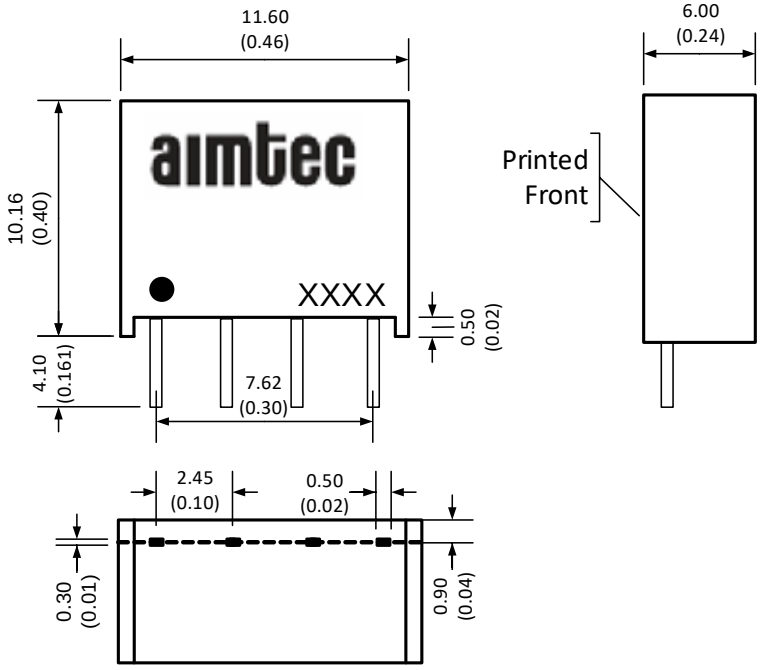
Safety Specifications

Parameters	
Agency approvals	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

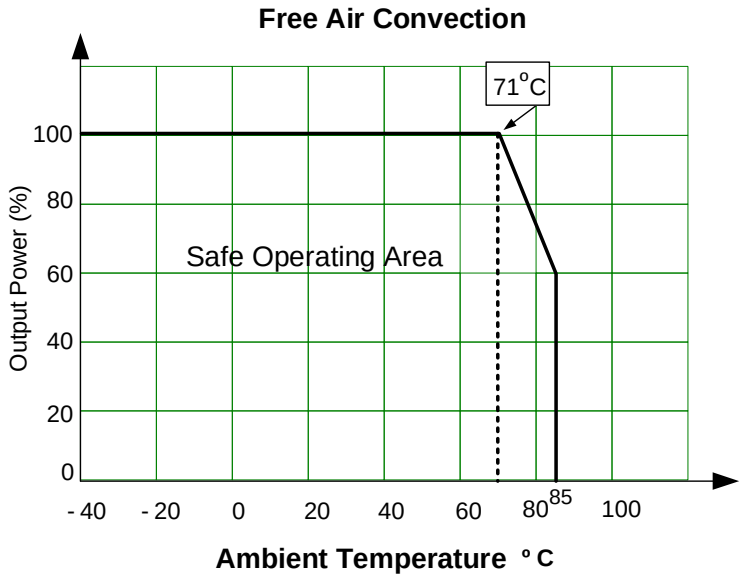
Pin Out Specifications

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

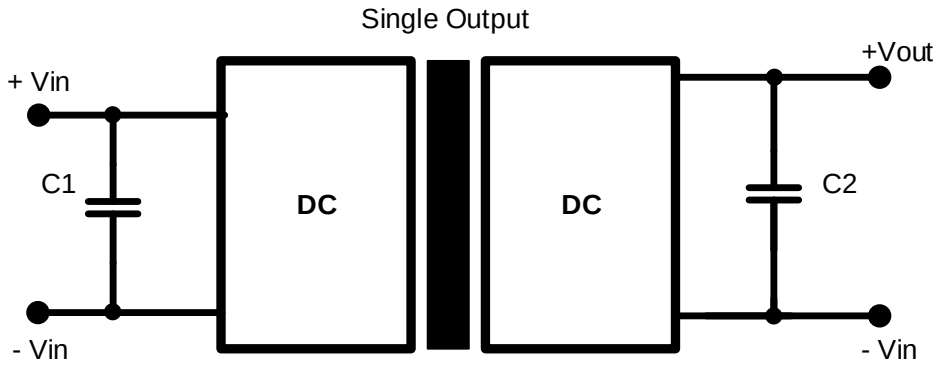
Dimensions



Derating

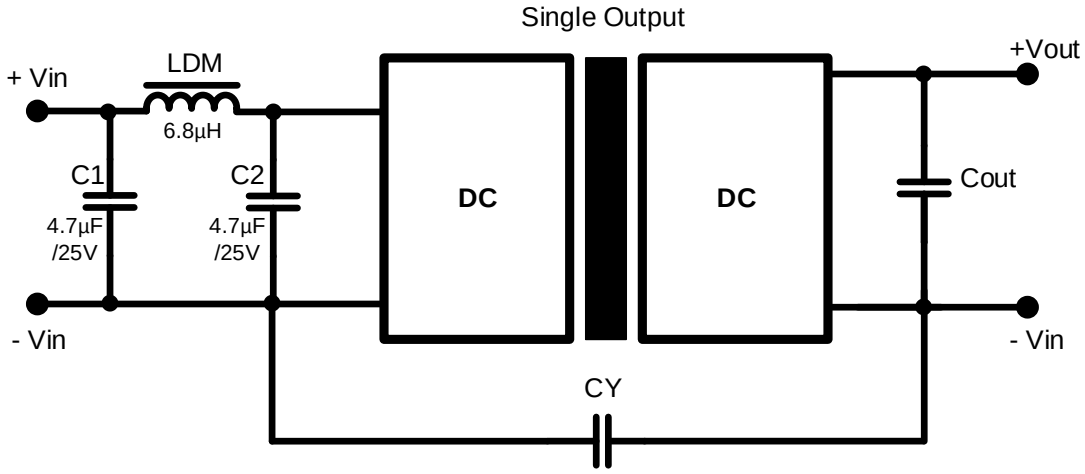


Typical Application Circuit



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

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	

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