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AM2SS-JZ

SIP4 Package

The AM2SS-JZ is a 2W SIP4 DC/DC converter that offers great cost savings thanks to an improved manufacturing process. It also features excellent reliability and performance while offering a standard input voltage range of 5VDC as well as an output voltage of 5-24V. This compact SIP4 design will surely benefit your new system design.

This new series offers great operating temperatures, from -40 to 85°C with full power up to 71°C. Also, an isolation of 1500VDC for improved reliability and system safety as well as a great 3,500,000h MTBF come standard.

The AM2SS-JZ is perfect for instrumentation, industrial controls, industrial applications, communication and IoT applications.

Features

- High I/O Isolation of 1500VDC
- Continuous Short circuit protection
- Operating Temp: -40 °C to +85 °C
- Industry standard SIP4 pin-out
- Efficiency up to 84%
- Unregulated output

RoHS

3yr Warranty

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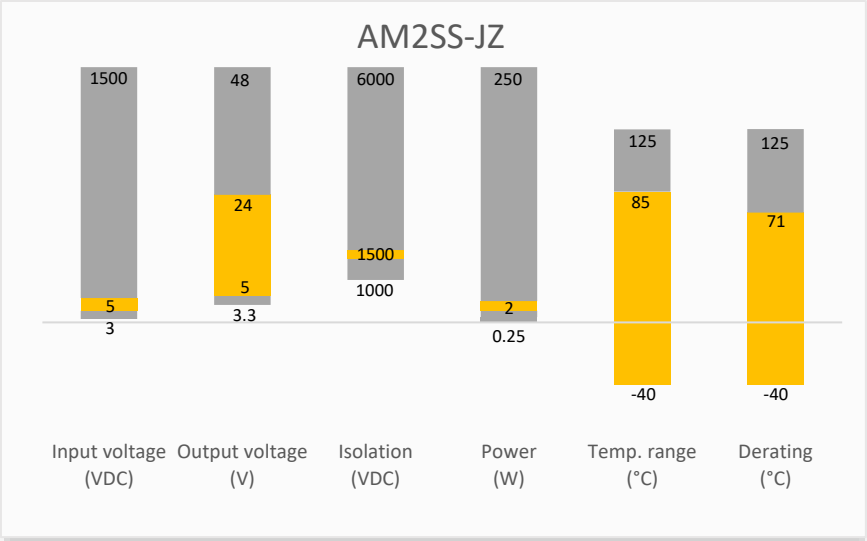
Summary



Training

Product Training Video (click to open)

Press Release

Coming Soon!

Application Notes

Applications

IoT

Industrial

Telecom

Portable Equipment

Models & Specifications

Single Output

Model	Input Voltage (VDC)	Output Voltage (VDC)	Input Current Full | No load typ. (mA)	Output Current max | min (mA)*	Isolation (VDC)	Maximum capacitive Load (µF)	Efficiency Typ. (%)
AM2SS-0505SJZ #	5 (4.5-5.5)	5	494 / 8	400 / 40	1500	2400	81
AM2SS-0509SJZ	5 (4.5-5.5)	9	477 / 8	222 / 22	1500	1000	84
AM2SS-0512SJZ	5 (4.5-5.5)	12	494 / 8	167 / 17	1500	560	81
AM2SS-0515SJZ	5 (4.5-5.5)	15	494 / 8	133 / 13	1500	560	81
AM2SS-0524SJZ	5 (4.5-5.5)	24	477 / 8	83 / 8	1500	220	84

* Performance will be degraded if the load is not within the output current range.

Input Specification

Parameters	Conditions	Typical	Maximum	Units
Filter	Capacitor			
Absolute maximum rating	Maximum duration 1s, 5Vin	> -0.7	9	VDC
Input reflected ripple current		15		mA

Isolation Specification

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec, leakage ≤ 1mA	>1500		VDC
Resistance	500VDC	>1000		MΩ
Capacitance	100kHz/0.1V	20		pF

Output Specification

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	See output voltage tolerance	10		%
Line regulation	Per 1% Vin change		1.2	%
Load regulation	10-100% load, 5Vout models	11	20	%
	10-100% load, 9/12/15Vout models	8	15	%
	10-100% load, 24Vout models	6	15	%
Ripple & Noise*		75	200	mV pk-pk
Temperature coefficient		±0.02		%/°C

* Ripple and Noise are measured at 20MHz bandwidth. Please refer to the application note for specific details.

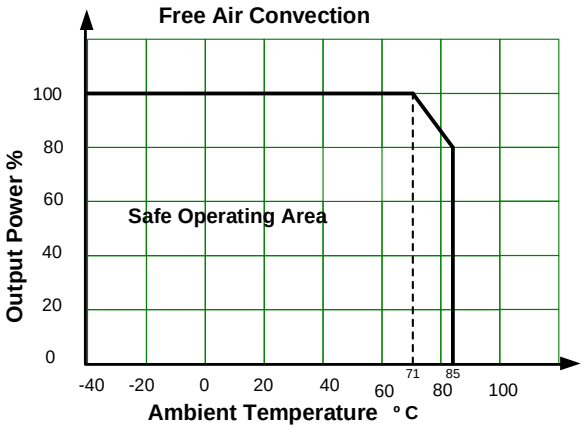
General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	Full load, nominal input	220		KHz
Short circuit protection	Continuous, Auto recovery			
Operating temperature	With derating	-40 to +85		°C
Storage temperature		-55 to +125		°C
Case temperature rise	Ta = 25°C	25		°C
Manual soldering temperature	1.5mm away from case, duration ≤ 10sec		300	°C

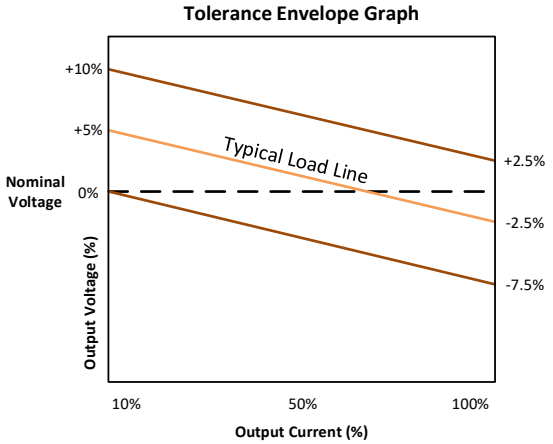
Cooling	Free air convection			
Humidity	Non-condensing	>5	95	% RH
Vibration	10-150Hz, 5G, 0.75mm, along all axis			
Case material	Black plastic (flammability to UL 94V-0)			
Weight		1.6		g
Dimensions (L x W x H)	0.46 x 0.30 x 0.40 inches (11.60 x 7.55 x 10.16 mm)			
MTBF	3 500 000 hrs (MIL-HDBK -217F, t=+25°C) / Full Load			
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	UL 62368-1 (With models marked with # only)	
Standards	EMC - Conducted and radiated emission	CISPR32 / EN55032, class B with the recommended EMI circuit
	Electrostatic Discharge Immunity	IEC 61000-4-2 Air ±8KV, Contact ±6KV, Criteria B

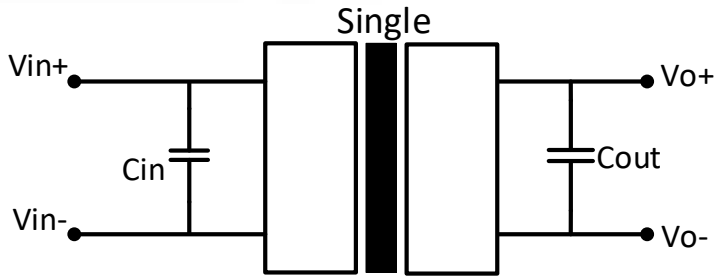
Derating



Output voltage tolerance

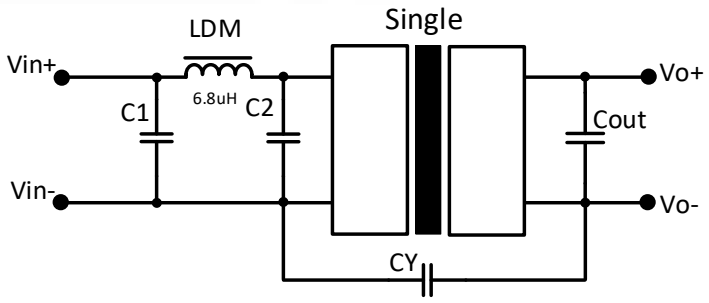


Typical application circuit



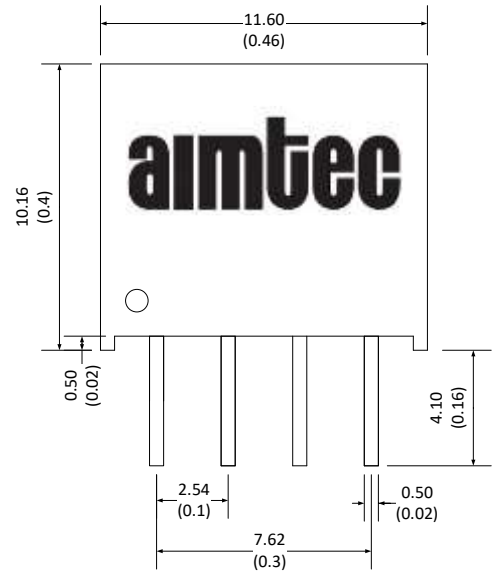
Vin	Cin	Single output models	
		Vout	Cout
5	4.7μF/16V	5V	10μF/16V
-	-	9V	2.2μF/25V
-	-	12V	2.2μF/25V
-	-	15V	1μF/25V
-	-	24V	1μF/50V

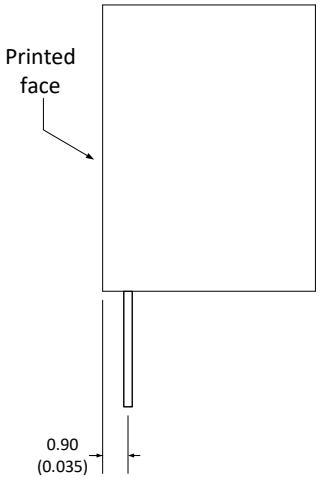
Recommended EMI circuit

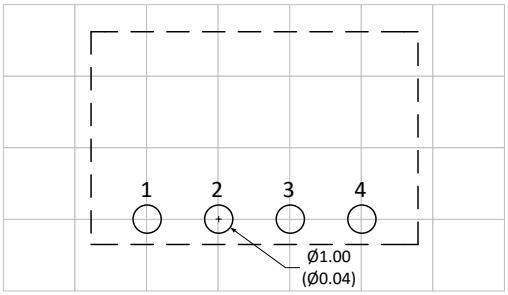


Vin	C1/C2	Vout	CY	Cout
5V	4.7μF/16V	All output	270pF/2kVdc	Refer to Cout in typical circuit

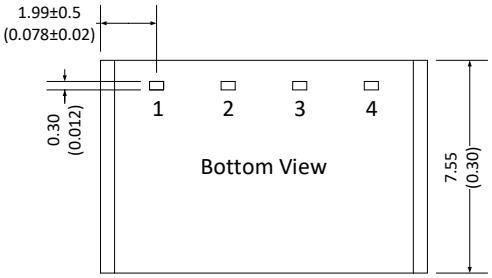
Dimensions







Grid size: 2.54*2.54mm



Note:
Unit: mm(inch)
General tolerance: ±0.25 (0.01)
Pin tolerance: ±0.1 (0.004)

Pin Out Specifications	
Pin	1.5KV isolation Single output
1	-V Input
2	+V Input
3	-V Output
4	+V Output