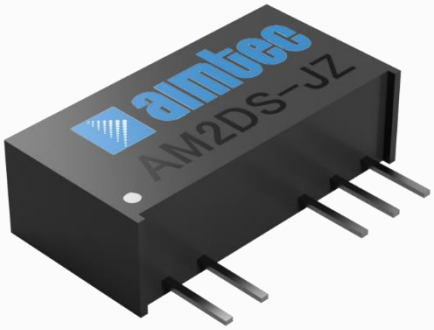
Click to ORDER samples

AM2DS-JZ



SIP7 Package

The AM2DS-JZ is a 2W SIP7 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 12-24VDC as well as an output voltage of 3.3-24V. This compact SIP7 design will surely benefit your new system design.

This new series offers great operating temperatures, from -40 to 105°C with full power up to 85°C. Also, an isolation of 1500 or 3000VDC for improved reliability and system safety as well as a great 3,500,000h MTBF come standard.

The AM2DS-JZ is perfect for instrumentation, industrial controls, communication and IoT applications.

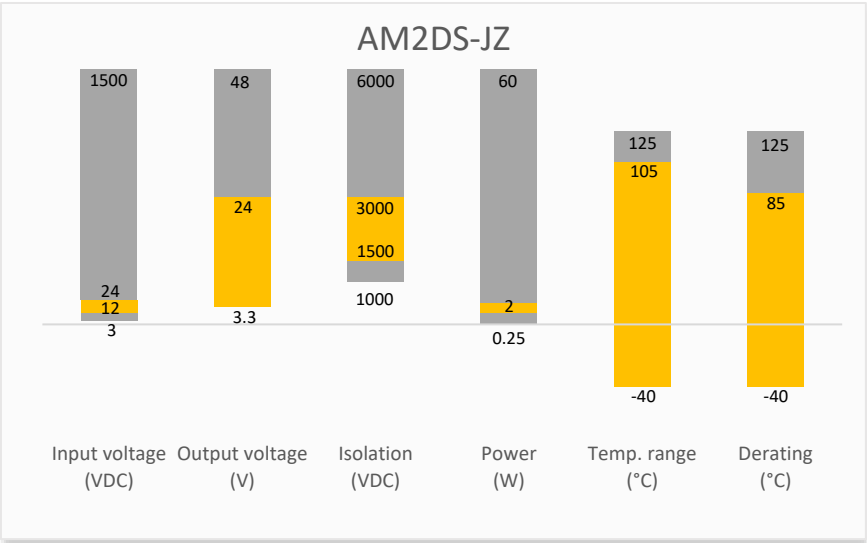
Features

- High I/O Isolation of 1500/3000VDC
- Continuous Short circuit protection
- Operating Temp: -40 °C to +105 °C
- Industry standard SIP7 pin-out
- Efficiency up to 86%
- Unregulated output

RoHS

3yr Warranty

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. (%)
AM2DS-1205SJZ	12 (10.8-13.2)	5	208 / 8	400 / 40	1500	2400	82
AM2DS-1212SJZ	12 (10.8-13.2)	12	208 / 8	167 / 17	1500	560	84
AM2DS-1215SJZ	12 (10.8-13.2)	15	208 / 8	133 / 13	1500	560	85
AM2DS-1224SJZ	12 (10.8-13.2)	24	208 / 8	83 / 8	1500	220	86
AM2DS-2405SJZ	24 (21.6-26.4)	5	104 / 8	400 / 40	1500	2400	80
AM2DS-2412SJZ	24 (21.6-26.4)	12	104 / 8	167 / 17	1500	560	84
AM2DS-2415SJZ	24 (21.6-26.4)	15	104 / 8	133 / 13	1500	560	86
AM2DS-2424SJZ	24 (21.6-26.4)	24	104 / 8	83 / 8	1500	220	86
AM2DS-1205SH30JZ	12 (10.8-13.2)	5	208 / 8	400 / 40	3000	2400	82
AM2DS-1212SH30JZ	12 (10.8-13.2)	12	208 / 8	167 / 17	3000	560	84
AM2DS-1215SH30JZ	12 (10.8-13.2)	15	208 / 8	133 / 13	3000	560	85
AM2DS-1224SH30JZ	12 (10.8-13.2)	24	208 / 8	83 / 8	3000	220	86
AM2DS-2405SH30JZ	24 (21.6-26.4)	5	104 / 8	400 / 40	3000	2400	80
AM2DS-2412SH30JZ	24 (21.6-26.4)	12	104 / 8	167 / 17	3000	560	84
AM2DS-2415SH30JZ	24 (21.6-26.4)	15	104 / 8	133 / 13	3000	560	86
AM2DS-2424SH30JZ	24 (21.6-26.4)	24	104 / 8	83 / 8	3000	220	86

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

Dual 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. (%)
AM2DS-1203DJZ	12 (10.8-13.2)	±3.3	208 / 8	±303 / ±30	1500	1200	75
AM2DS-1205DJZ	12 (10.8-13.2)	±5	208 / 8	±200 / ±20	1500	1200	80
AM2DS-1212DJZ	12 (10.8-13.2)	±12	208 / 8	±83 / ±8	1500	220	83
AM2DS-1215DJZ	12 (10.8-13.2)	±15	208 / 8	±67/ ±7	1500	220	83
AM2DS-2405DJZ	24 (21.6-26.4)	±5	104 / 8	±200 / ±20	1500	1200	80
AM2DS-2412DJZ	24 (21.6-26.4)	±12	104 / 8	±83 / ±8	1500	220	83
AM2DS-2415DJZ	24 (21.6-26.4)	±15	104 / 8	±67/ ±7	1500	220	83
AM2DS-1203DH30JZ	12 (10.8-13.2)	±3.3	208 / 8	±303 / ±30	3000	1200	75
AM2DS-1205DH30JZ	12 (10.8-13.2)	±5	208 / 8	±200 / ±20	3000	1200	80
AM2DS-1212DH30JZ	12 (10.8-13.2)	±12	208 / 8	±83 / ±8	3000	220	83
AM2DS-1215DH30JZ	12 (10.8-13.2)	±15	208 / 8	±67/ ±7	3000	220	83
AM2DS-2405DH30JZ	24 (21.6-26.4)	±5	104 / 8	±200 / ±20	3000	1200	80
AM2DS-2412DH30JZ	24 (21.6-26.4)	±12	104 / 8	±83 / ±8	3000	220	83
AM2DS-2415DH30JZ	24 (21.6-26.4)	±15	104 / 8	±67/ ±7	3000	220	83

* 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, 12Vin	>0.7	18	VDC
	Maximum duration 1s, 24Vin	>0.7	30	VDC
Input reflected ripple current		30		mA

Isolation Specification

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec, leakage ≤ 1mA	>1500		VDC
	60 sec, leakage ≤ 1mA for H30 models	>3000		VDC
Resistance	500VDC	>1000		MΩ
Capacitance	100kHz/0.1V	20		pF

Output Specification

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	See output voltage tolerance	±5		%
Line regulation	Per 1% Vin change, 3.3Vout models		1.5	%
	Per 1% Vin change, other models		1.2	%
Load regulation	10-100% load, 3.3Vout models	18		%
	10-100% load, 5Vout models	12		%
	10-100% load, 12Vout models	8		%
	10-100% load, 15Vout models	7		%
	10-100% load, 24Vout models	6		%
Ripple & Noise*		75	180	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.

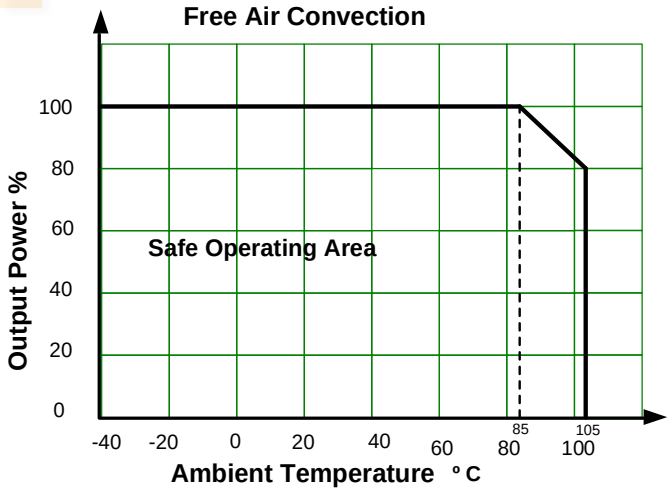
General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	Full load, nominal input	260		KHz
Short circuit protection	Continuous, Auto recovery			
Operating temperature	With derating	-40 to +105		°C
Storage temperature		-55 to +125		°C
Case temperature rise	Ambient temperature at 25°C, 1500V isolation models	15		°C
	Ambient temperature at 25°C, 3000V isolation models	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, 30Min, along all axis			
Case material	Black plastic (flammability to UL 94V-0)			
Weight		2.4		g
Dimensions (L x W x H)		0.77 x 0.28 x 0.40 inches (19.65 x 7.05 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.

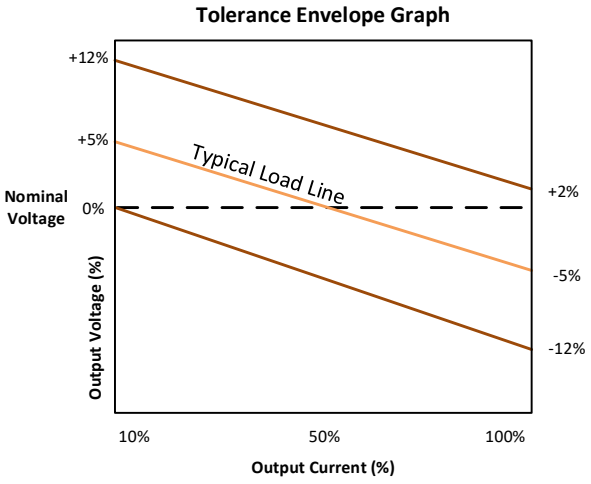
Safety Specifications		
Parameters		
Standards	Information technology Equipment	Design to meet IEC/EN/UL62368
	EMC - Conducted and radiated emission	CISPR32 / EN55032, class B with the recommended EMI circuit
	Electrostatic Discharge Immunity	IEC 61000-4-2 Contact ±6KV, Criteria B

Derating

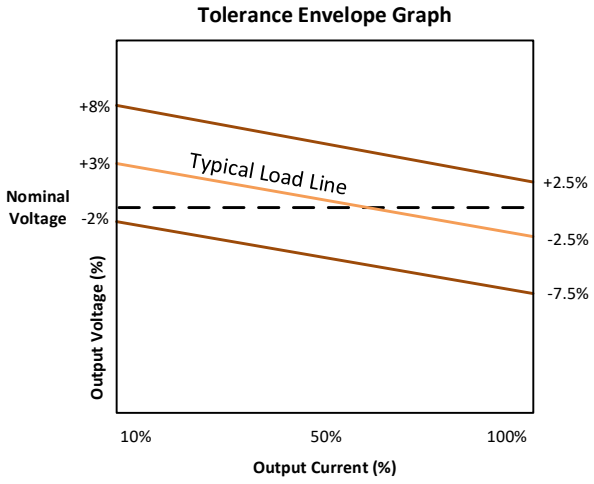


Output voltage tolerance

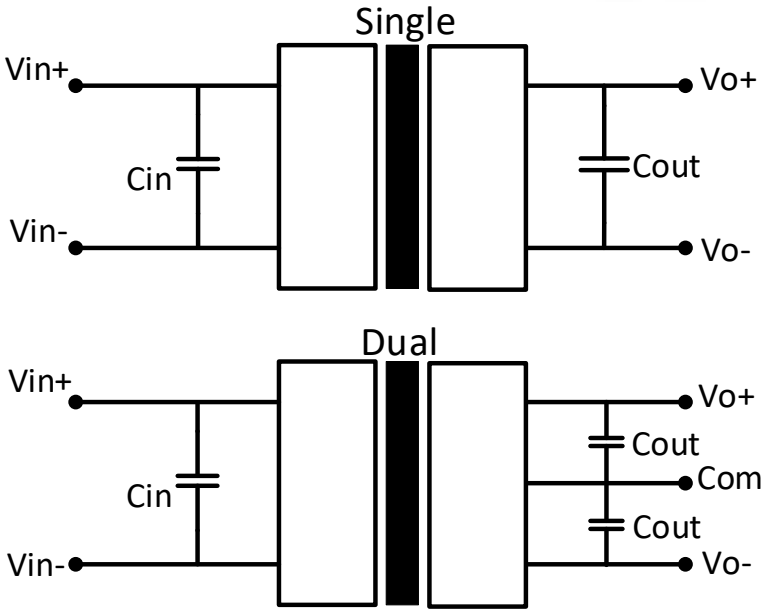
3.3Vout models



Other models



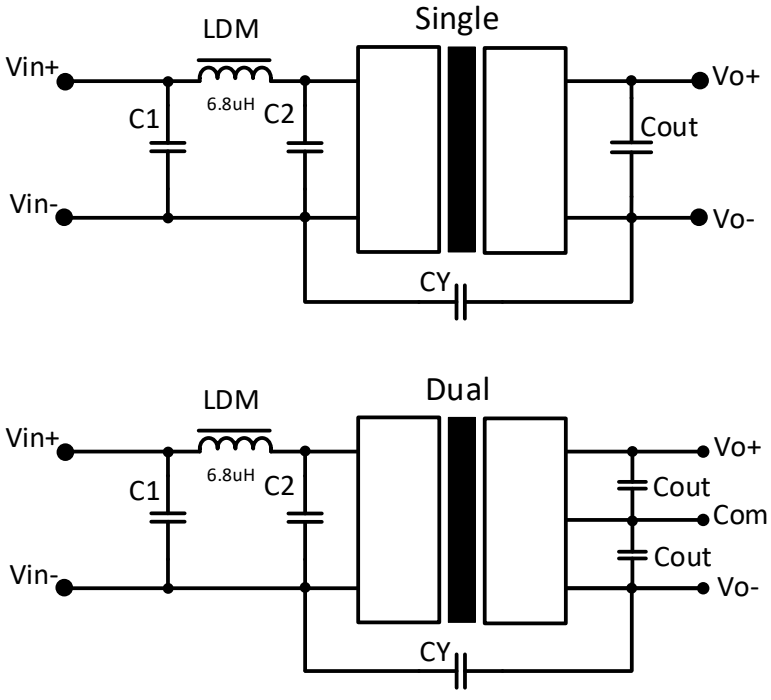
Typical application circuit



Vin	Cin
12V	2.2µF/25V
24V	1µF/50V

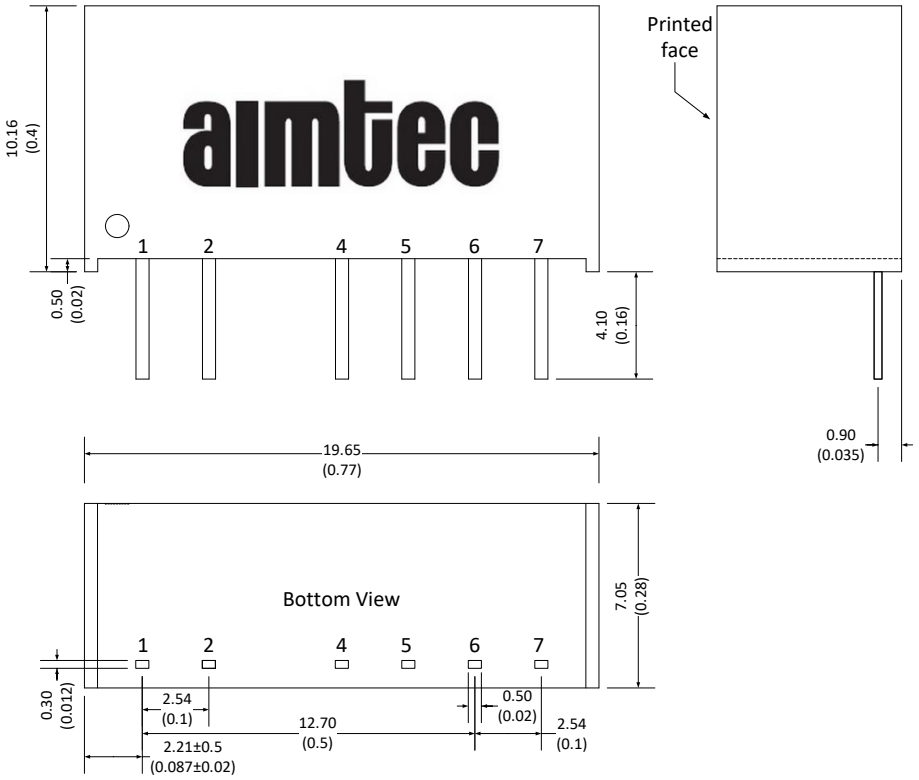
Single output models		Dual output models	
Vout	Cout	Vout	Cout
3.3/5V	10µF/16V	±3.3/±5V	4.7µF/16V
12V	2.2µF/25V	±12/±15V	1µF/25V
15V	1µF/25V	-	-
24V	1µF/50V	-	-

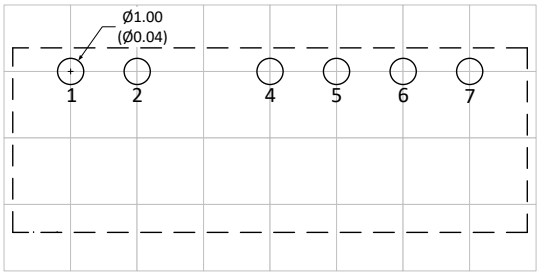
Recommended EMI circuit



Isolation	C1/C2	CY
1.5KV	4.7µF/50V	270pF/2kVdc
3KV	4.7µF/50V	270pF/3kVdc

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	1.5KV isolation Dual output	3KV isolation Single output	3KV isolation Dual output
1	+V Input	+V Input	+V Input	+V Input
2	-V Input	-V Input	-V Input	-V Input
4	-V Output	-V Output	No pin	No pin
5	No pin	Com	-V Output	-V Output
6	+V Output	+V Output	No pin	Com
7	No pin	No pin	+V Output	+V Output

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