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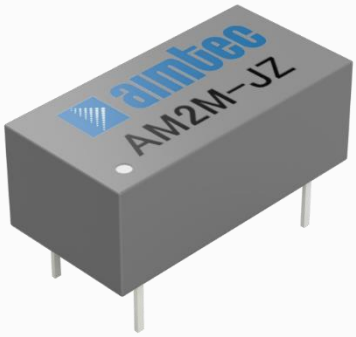
AM2M-JZ



DIP14 Package

The AM2M-JZ is a 2W DIP14 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 3.3-15V. This compact DIP14 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 3000VDC for improved reliability and system safety as well as a great 3,500,000h MTBF come standard.

The AM2M-JZ is suitable for instrumentation, industrial controls, communication and IoT applications.

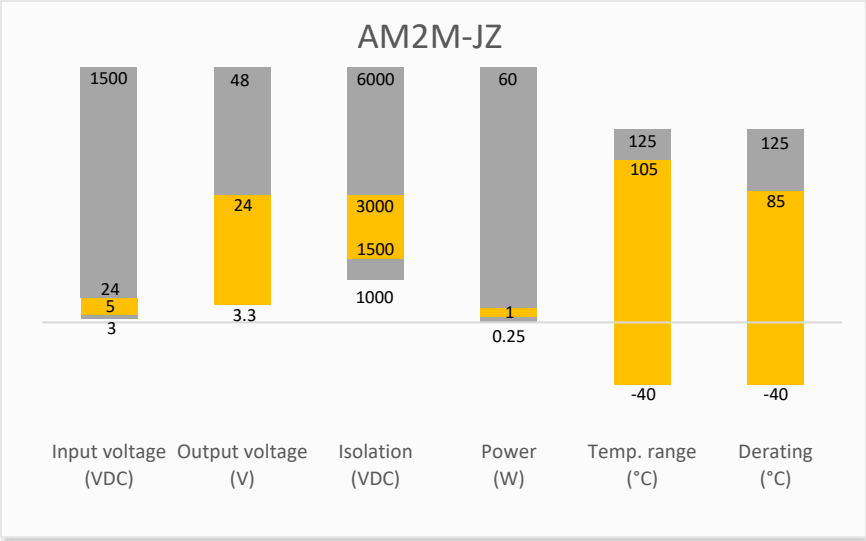
Features

- High I/O Isolation of 3000VDC
- Continuous Short circuit protection
- Operating Temp: -40 °C to +105 °C
- Industry standard DIP14 pin-out
- Efficiency up to 83%
- 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

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. (%)
AM2M-1203DH30JZ	12 (10.8-13.2)	±3.3	208 / 8	±303 / ±30	3000	±1200	75
AM2M-1205DH30JZ	12 (10.8-13.2)	±5	208 / 8	±200 / ±20	3000	±1200	80
AM2M-1212DH30JZ	12 (10.8-13.2)	±12	208 / 8	±83 / ±8	3000	±220	83
AM2M-1215DH30JZ	12 (10.8-13.2)	±15	208 / 8	±67 / ±7	3000	±220	83
AM2M-2405DH30JZ	24 (21.6-26.4)	±5	104 / 8	±200 / ±20	3000	±1200	80
AM2M-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	>3000		VDC
Resistance	500VDC	>1000		MΩ
Capacitance	100kHz/0.1V	20		pF

Output Specification

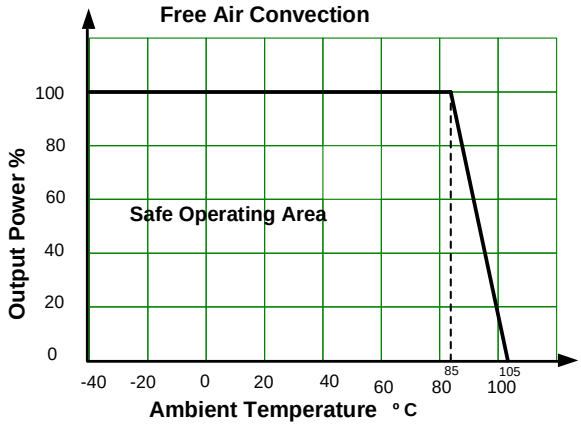
Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	See output voltage tolerance	±5		%
Line regulation	Per 1% Vin change, 3.3Vout models		±1.5	%
	Per 1% Vin change, other models		±1.2	%
Load regulation	10-100% load, 3.3Vout models	18		%
	10-100% load, 5Vout models	12		%
	10-100% load, 12Vout models	8		%
	10-100% load, 15Vout models	7		%
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	Without derating	-40 to +85		°C
Storage temperature		-55 to +125		°C
Case temperature rise	Ambient temperature at 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, 30Min, along all axis			
Case material	Black plastic (flammability to UL 94V-0)			
Weight		2.4		g
Dimensions (L x W x H)		0.8 x 0.4 x 0.32 inches (20.32 x 10.16 x 8.20 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.				

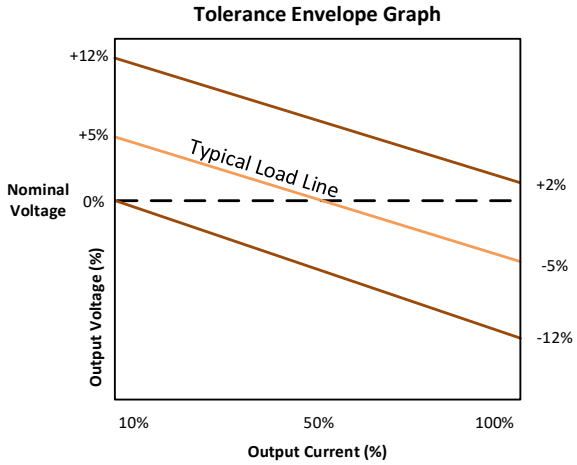
Safety Specifications		
Parameters		
Standards	Information technology Equipment	Design to meet IEC/EN/UL62368
	EMC - Conducted and radiated emission	CISPR32 / EN55032, class B with the recommended EMI circuit
	Electrostatic Discharge Immunity	IEC 61000-4-2 Contact ±6KV, Criteria B

Derating

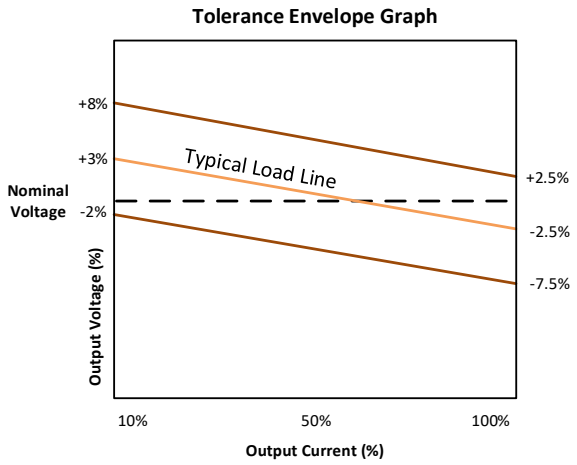


Output voltage tolerance

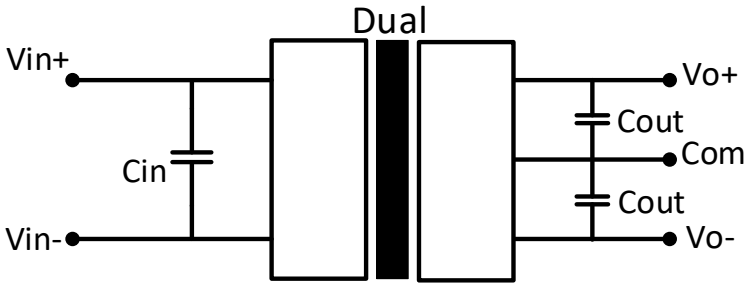
3.3Vout models



Other models



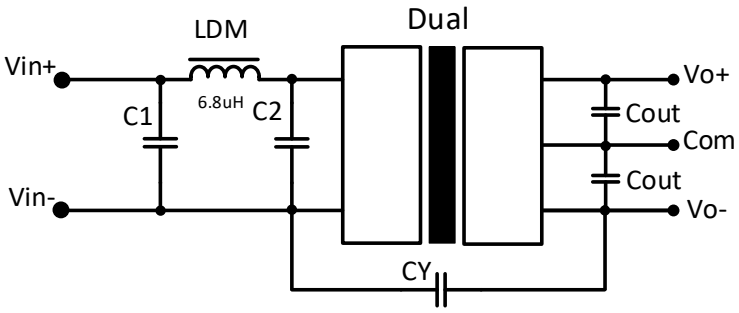
Typical application circuit



Vin	Cin
12V	2.2µF/25V
24V	1µF/50V

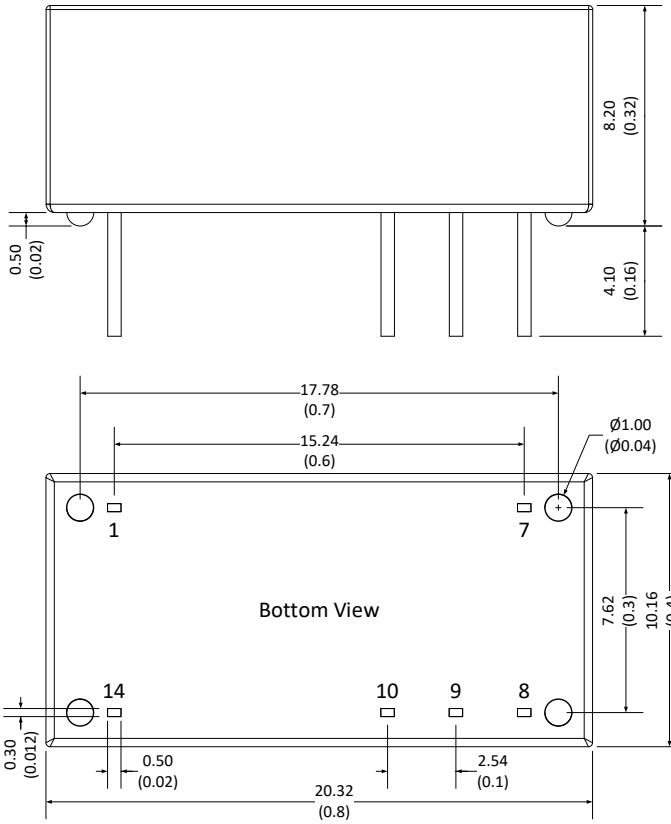
Vout	Cout
±3.3/±5V	4.7µF/16V
±12/±15V	1µF/25V

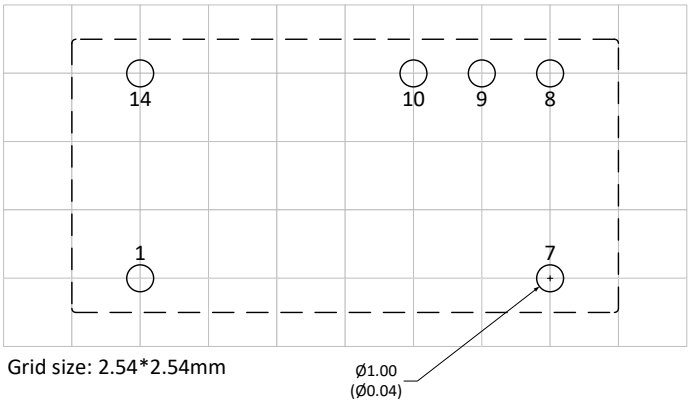
Recommended EMI circuit



Vin	C1/C2	CY
12/24V	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	Dual output
1	-V Input
7	NC
8	+V Output
9	Com
10	-V Output
14	+V Input