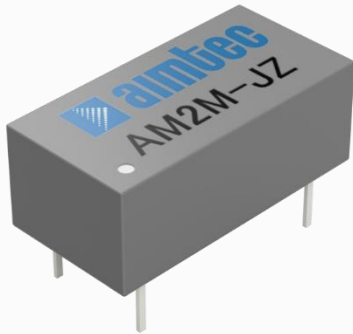


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AM2M-JZ



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.

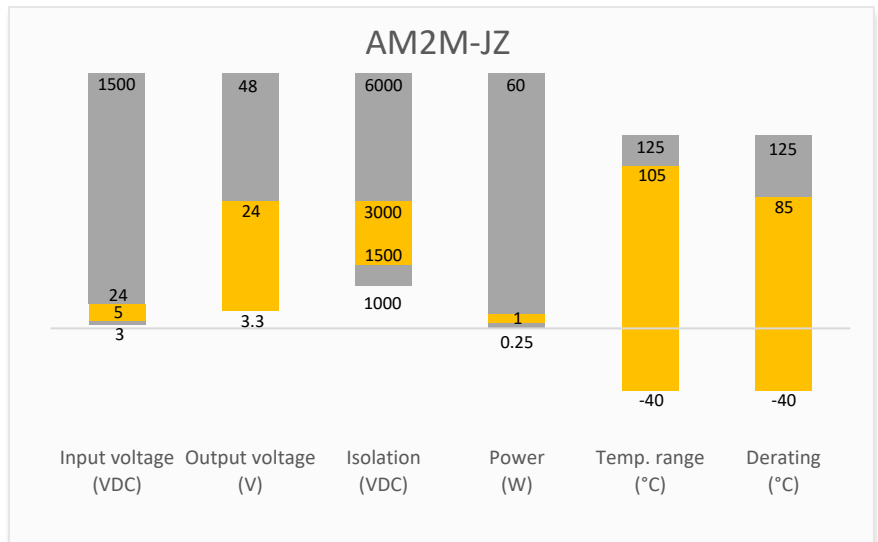
This new series offers great operating temperatures, from -40 to 105°C with full power up to 85°C. Also, an isolation of 3000VDC for improved reliability and system safety as well as a great 3,500,000h MTBF come standard.

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

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

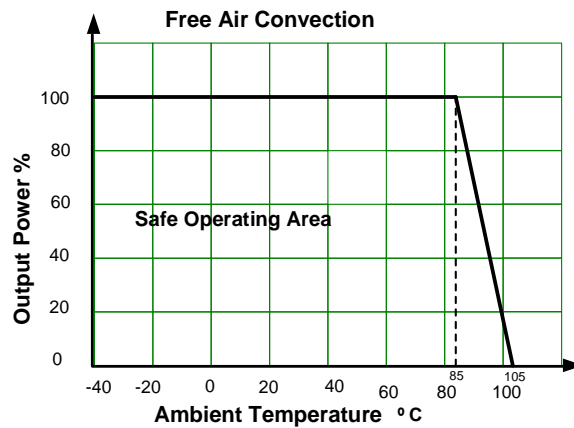
Output Specification				
Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	See output voltage tolerance	±5		%
Line regulation	Per 1% Vin change, 3.3Vout models		±1.5	%
	Per 1% Vin change, other models		±1.2	%
Load regulation	10-100% load, 3.3Vout models	18		%
	10-100% load, 5Vout models	12		%
	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.				

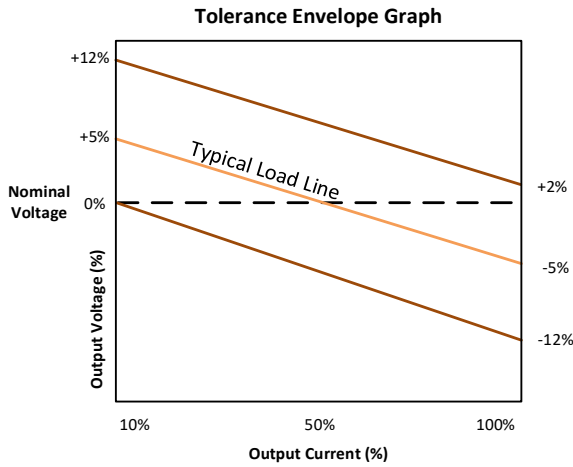
Safety Specifications		
Parameters		
Standards	Information technology Equipment	Design to meet IEC/EN/UL62368
	EMC - Conducted and radiated emission	CISPR32 / EN55032, class B with the recommended EMI circuit
	Electrostatic Discharge Immunity	IEC 61000-4-2 Contact ±6KV, Criteria B

## Derating

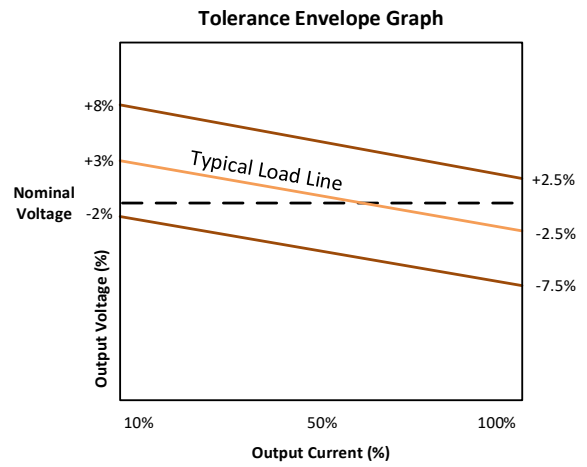


Output voltage tolerance

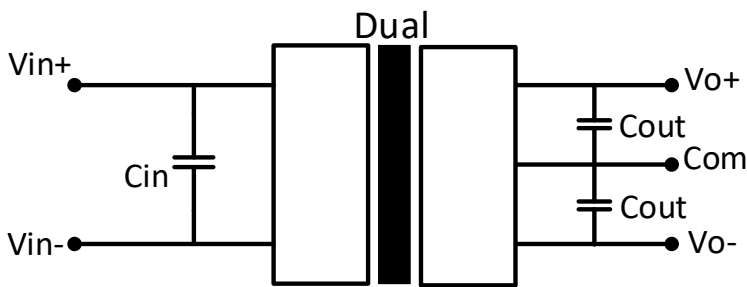
3.3Vout models



Other models



Typical application circuit

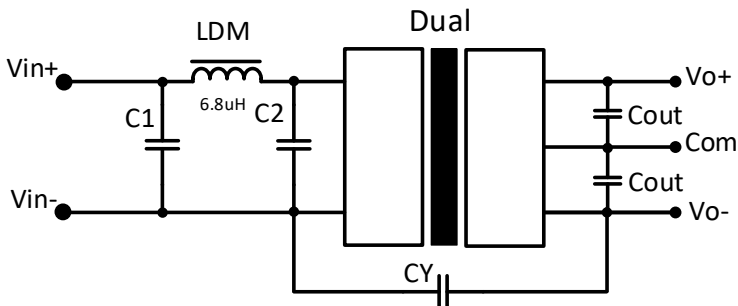


Vin	Cin
12V	2.2μF/25V
24V	1μF/50V

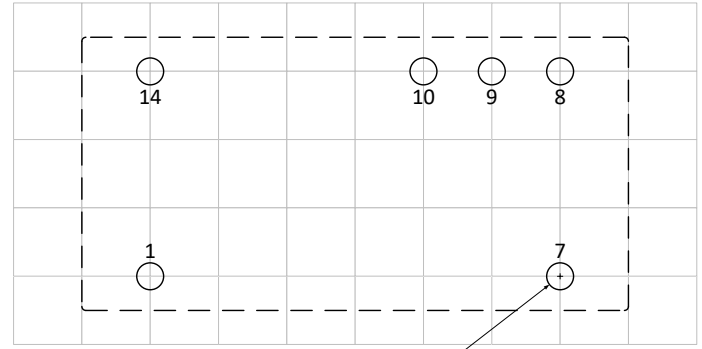
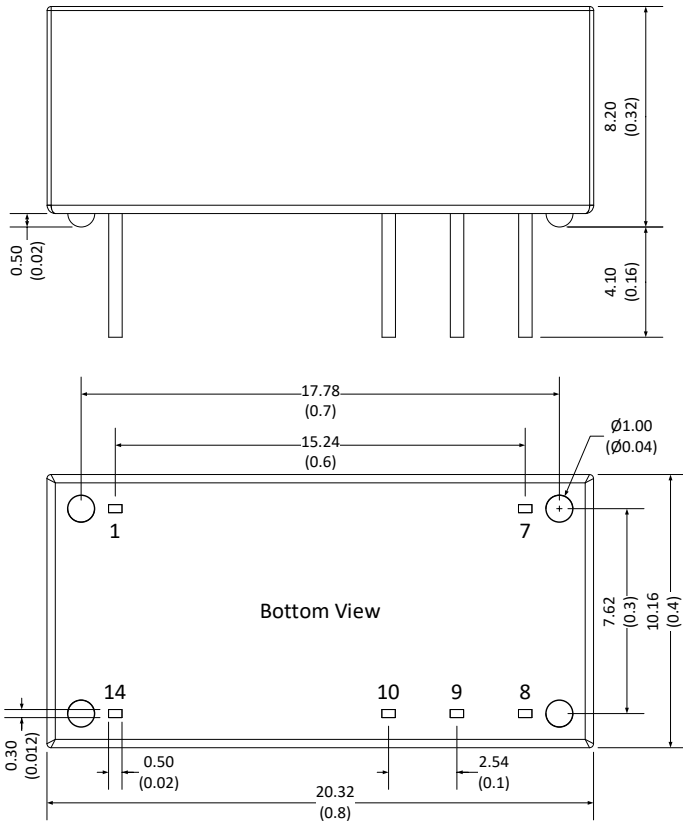
Vout	Cout
±3.3/±5V	4.7μF/16V
±12/±15V	1μF/25V

Recommended EMI circuit



Vin	C1/C2	CY
12/24V	4.7μF/50V	270pF/3kVdc

Dimensions



Grid size: 2.54\*2.54mm

Ø1.00  
(Ø0.04)

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

**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](http://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 the ones listed in this datasheet. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at [www.aimtec.com](http://www.aimtec.com).