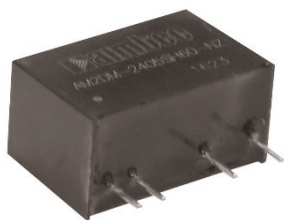


Series AM2DM-NZ

2 Watt | DC-DC Converter



FEATURES:

- 7 pin SIP package
- High efficiency up to 84%
- Reinforced insulation
- Leakage current < 2μA
- Operating temperature -40°C to + 85°C
- Isolation voltage: 4200VAC or 6000VDC
- Ultra-low Isolation capacitance of 5pF
- IEC/EN/UL60601-1
- 1xMOPP/2xMOOP



Models Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Max. Capacitive Load (μF)	Isolation (VAC)	Isolation (VDC)	Efficiency (%)
AM2DM-0505SH60-NZ	4.5-5.5	5	400	1000	4200	6000	77
AM2DM-0512SH60-NZ	4.5-5.5	12	167	470	4200	6000	79
AM2DM-0515SH60-NZ	4.5-5.5	15	133	470	4200	6000	79
AM2DM-1205SH60-NZ	10.8-13.2	5	400	1000	4200	6000	77
AM2DM-1212SH60-NZ	10.8-13.2	12	167	470	4200	6000	80
AM2DM-1215SH60-NZ	10.8-13.2	15	133	470	4200	6000	82
AM2DM-1505SH60-NZ	13.5-16.5	5	400	1000	4200	6000	77
AM2DM-2405SH60-NZ	21.6-26.4	5	400	1000	4200	6000	79
AM2DM-2412SH60-NZ	21.6-26.4	12	167	470	4200	6000	82
AM2DM-2415SH60-NZ	21.6-26.4	15	133	470	4200	6000	84

Models Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Max. Capacitive Load (μF)	Isolation (VAC)	Isolation (VDC)	Efficiency (%)
AM2DM-0505DH60-NZ	4.5-5.5	±5	±200	470	4200	6000	78
AM2DM-0509DH60-NZ	4.5-5.5	±9	±111	470	4200	6000	78
AM2DM-0512DH60-NZ	4.5-5.5	±12	±83	220	4200	6000	78
AM2DM-0515DH60-NZ	4.5-5.5	±15	±67	220	4200	6000	80
AM2DM-1205DH60-NZ	10.8-13.2	±5	±200	470	4200	6000	78
AM2DM-1209DH60-NZ	10.8-13.2	±9	±111	470	4200	6000	82
AM2DM-1212DH60-NZ	10.8-13.2	±12	±83	220	4200	6000	82
AM2DM-1215DH60-NZ	10.8-13.2	±15	±67	220	4200	6000	80
AM2DM-2405DH60-NZ	21.6-26.4	±5	±200	470	4200	6000	79
AM2DM-2409DH60-NZ	21.6-26.4	±9	±111	470	4200	6000	81
AM2DM-2412DH60-NZ	21.6-26.4	±12	±83	220	4200	6000	82
AM2DM-2415DH60-NZ	21.6-26.4	±15	±67	220	4200	6000	81

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	5	4.5-5.5		VDC
	12	10.8-13.2		
	15	13.5-16.5		
	24	21.6-26.4		
Absolute Max Input Voltage (1s)	5V		-0.7 - 9	VDC
	12V		-0.7 - 18	
	15V		-0.7 - 21	
	24V		-0.7 - 30	
Filter	Capacitor			
Input reflected ripple current		200		mA p-p
Input Current (no load/full load)	5	35/274		mA
	12	15/114		
	15	18/171		
	24	10/56		

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60sec		4200	VAC
			6000	VDC
Resistance		> 1000		MOhm
Capacitance		5		pF
Leakage current	250VAC, 50/60Hz		2	μA

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	See tolerance graph			
Short Circuit protection	Momentary (3 sec.)			
Line voltage regulation	For 1.0% of Vin		±1.2	% of Vout
Load voltage regulation	10~100% load, 5V		20	%
	10~100% load, Others		15	
Temperature coefficient	Full load	±0.02		%/°C
Ripple & Noise	At 20MHz Bandwidth	100	150	mV p-p

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	100		KHz
Max Case temperature			100	°C
Operating temperature	With no derating		-40 to +85	°C
Storage temperature		-55 to +125		°C
Cooling	Free air convection			
Humidity			95	%
Case material	Black flame-retardant and heat-resistant plastic (UL94V-0)			
Weight		4.2		g
Dimensions (L x W x H)		0.77 x 0.39 x 0.49 inch	19.50 x 9.80 x 12.5 mm	
MTBF	>3,500,000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			

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

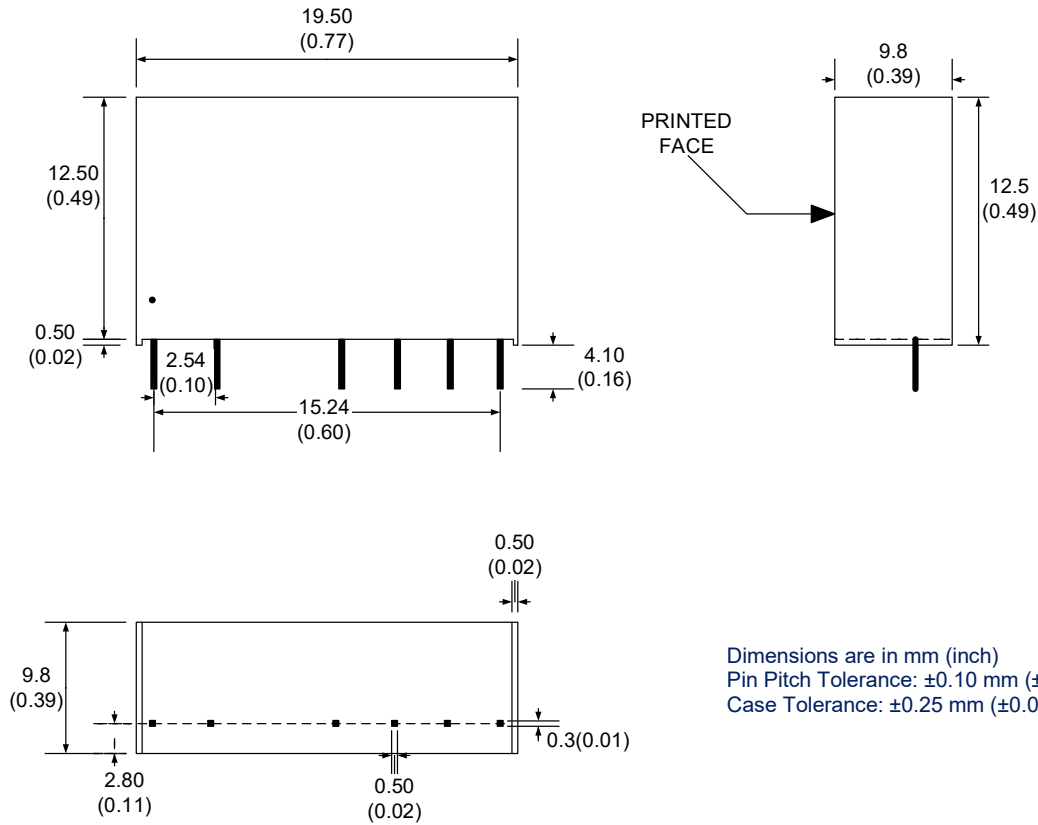
Safety Specifications

Parameters	
Standards	Designed to meet UL60601-1
	EN55022 Class B (see recommended circuit)
	IEC61000-4-2, Perf. Criteria B (ESD Contact +/- 8KV)

Pin Out Specifications

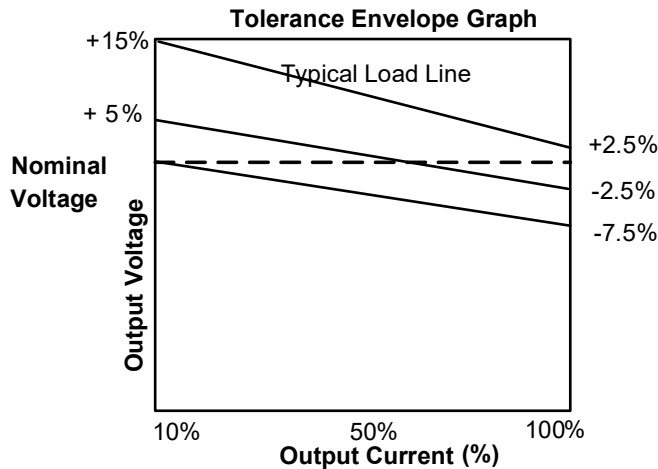
Pin	Single	Dual
1	+ V Input	+ V Input
2	- V Input	- V Input
5	- V Output	- V Output
6	No pin	Common
7	+ V Output	+ V Output

Dimensions

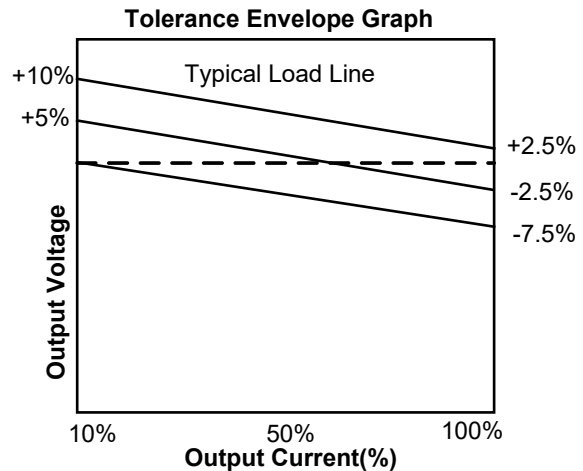


Typical Characteristics

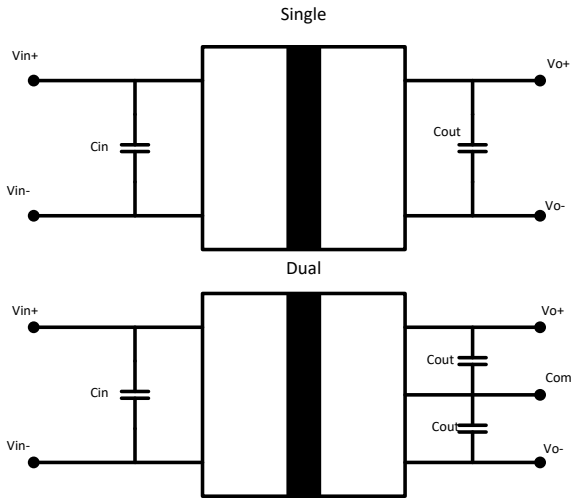
5V output models



Others



Typical application circuit



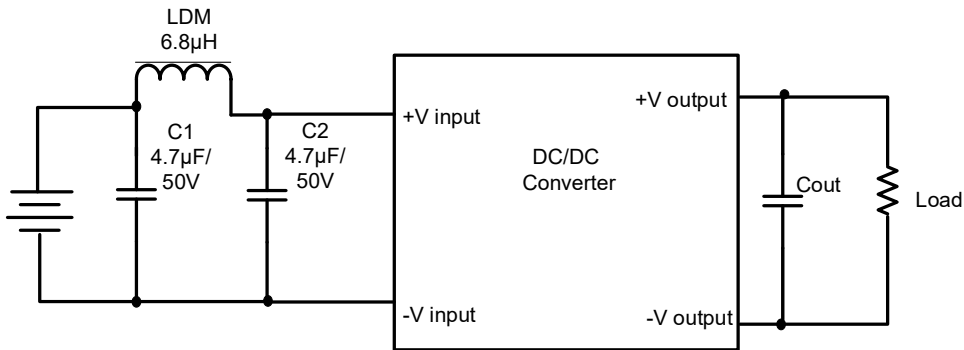
External capacitor – Single output

Vin (VDC)	Cin (μF)	Vout (VDC)	Cout (μF)
5	10	5	10
12 / 15	4.7	12	2.2
24	2.2	15	1

External capacitor – Dual output

Vin (VDC)	Cin (μF)	Vout (VDC)	Cout (μF)
5	10	±5	4.7
12	4.7	±9	2.2
24	2.2	±12/±15	1

EMI Recommended Circuit (Class B)



NOTE: Cout value is the same as referenced in the Application Circuit. For 24V input voltage models the recommended LDM value is 15μH.

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 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 than the ones listed in this datasheet. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.