aimtec
Your Power Partner

Not recommended for new design
Use AM2D-Z series

Series AM2D-NZ
2 Watt | DC-DC Converter

FEATURES:

- RoHS Compliant
- Low ripple and noise
- High efficiency up to 89%
- UL94-VO case
- Input / Output Isolation 1000, 3000VDC
- Operating temperature -40°C to + 105°C
- Pin compatible with multiple manufacturers
- 7 pin SIP package
- Continuous Short Circuit Protection

RoHS

Models
Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max(mA)	Isolation (VDC)	Efficiency (%)
AM2D-0505S-NZ	4.5-5.5	5	400	1000	89
AM2D-0509S-NZ	4.5-5.5	9	222	1000	84
AM2D-0512S-NZ	4.5-5.5	12	167	1000	84
AM2D-0515S-NZ	4.5-5.5	15	134	1000	84
AM2D-1205S-NZ	10.8-13.2	5	400	1000	84
AM2D-1209S-NZ	10.8-13.2	9	222	1000	84
AM2D-1212S-NZ	10.8-13.2	12	167	1000	84
AM2D-1215S-NZ	10.8-13.2	15	134	1000	84
AM2D-2405S-NZ	21.6-26.4	5	400	1000	84
AM2D-2409S-NZ	21.6-26.4	9	222	1000	84
AM2D-2412S-NZ	21.6-26.4	12	167	1000	84
AM2D-2415S-NZ	21.6-26.4	15	134	1000	84
AM2D-0505SH30-NZ	4.5-5.5	5	400	3000	80
AM2D-0509SH30-NZ	4.5-5.5	9	222	3000	81
AM2D-0512SH30-NZ	4.5-5.5	12	167	3000	82
AM2D-0515SH30-NZ	4.5-5.5	15	134	3000	84
AM2D-1205SH30-NZ	10.8-13.2	5	400	3000	80
AM2D-1209SH30-NZ	10.8-13.2	9	222	3000	83
AM2D-1212SH30-NZ	10.8-13.2	12	167	3000	84
AM2D-1215SH30-NZ	10.8-13.2	15	134	3000	85
AM2D-2405SH30-NZ	21.6-26.4	5	400	3000	81
AM2D-2409SH30-NZ	21.6-26.4	9	222	3000	84
AM2D-2412SH30-NZ	21.6-26.4	12	167	3000	85
AM2D-2415SH30-NZ	21.6-26.4	15	134	3000	86

Models
Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Efficiency (%)
AM2D-0505D-NZ	4.5-5.5	±5	±200	1000	80
AM2D-0509D-NZ	4.5-5.5	±9	±111	1000	84
AM2D-0512D-NZ	4.5-5.5	±12	±83	1000	84
AM2D-0515D-NZ	4.5-5.5	±15	±67	1000	84
AM2D-1205D-NZ	10.8-13.2	±5	±200	1000	80
AM2D-1209D-NZ	10.8-13.2	±9	±111	1000	84
AM2D-1212D-NZ	10.8-13.2	±12	±83	1000	85
AM2D-1215D-NZ	10.8-13.2	±15	±67	1000	84
AM2D-2405D-NZ	21.6-26.4	±5	±200	1000	80
AM2D-2409D-NZ	21.6-26.4	±9	±111	1000	84
AM2D-2412D-NZ	21.6-26.4	±12	±83	1000	84
AM2D-2415D-NZ	21.6-26.4	±15	±67	1000	84
AM2D-0505DH30-NZ	4.5-5.5	±5	±200	3000	82
AM2D-0509DH30-NZ	4.5-5.5	±9	±111	3000	83

Models

Dual output (continued)

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Efficiency (%)
AM2D-0512DH30-NZ	4.5-5.5	±12	±83	3000	85
AM2D-0515DH30-NZ	4.5-5.5	±15	±67	3000	85
AM2D-1205DH30-NZ	10.8-13.2	±5	±200	3000	83
AM2D-1209DH30-NZ	10.8-13.2	±9	±111	3000	84
AM2D-1212DH30-NZ	10.8-13.2	±12	±83	3000	86
AM2D-1215DH30-NZ	10.8-13.2	±15	±67	3000	86
AM2D-2405DH30-NZ	21.6-26.4	±5	±200	3000	84
AM2D-2409DH30-NZ	21.6-26.4	±9	±111	3000	85
AM2D-2412DH30-NZ	21.6-26.4	±12	±83	3000	87
AM2D-2415DH30-NZ	21.6-26.4	±15	±67	3000	87

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	5	4.5-5.5		VDC
	12	10.8-13.2		
	24	21.6-26.4		
Filter	Capacitor			

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		1000 and 3000	VDC
Resistance		> 1000		MOhm
Capacitance		60		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	See tolerance graph			
Voltage balance	Dual output	±1		%
Short Circuit protection	Continuous automatic recovery			
Line voltage regulation (Single)	For 1.0% of Vin	±1.2		%
Line voltage regulation (Dual)	For 1.0% of Vin	±1.2		%
Load voltage regulation (Single)	Load 10~100%	±8		%
Load voltage regulation (Dual)	Load 10~100%	±8		%
Temperature coefficient		±0.03		%/°C
Ripple & Noise	At 20MHz Bandwidth	75		mV p-p

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	100	300	KHz
Operating temperature		-40 to +75		°C
Storage temperature		-55 to +125		°C
Max Case temperature			+105	°C
Cooling	Free air convection			
Humidity			95	%
Case material	Plastic UL94-VO			
Weight		2.4		g
Dimensions (L x W x H)		0.772 x 0.276 x 0.394 inch	19.60 x 7.00 x 10.0 mm	
MTBF	>3 500 000hrs (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.

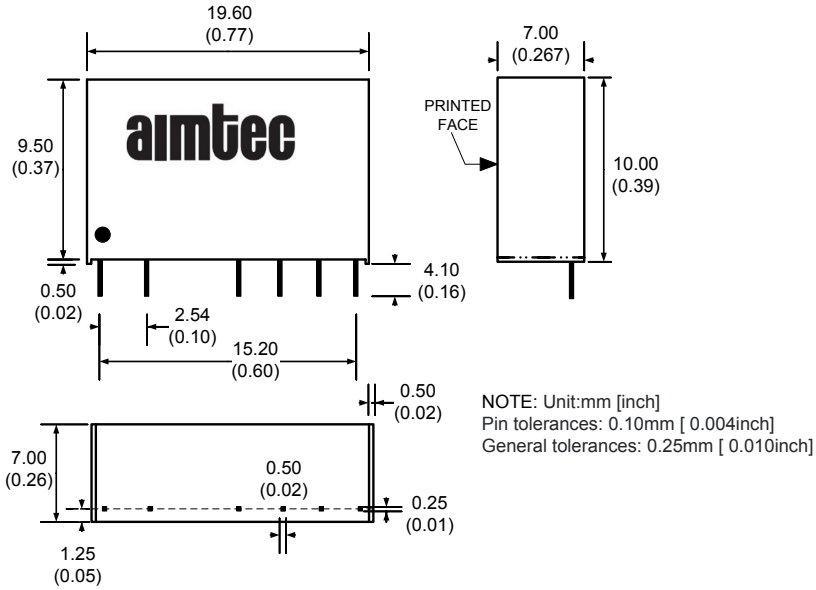
Safety Specifications

Parameters	
Agency approvals	Designed to meet
Standards	EN55022 Class B (with recommended circuit) IEC / EN61000-4-2 Contact ±6K Criteria B IEC / EN61000-4-2 Contact ±8K Criteria B

Pin Out Specifications

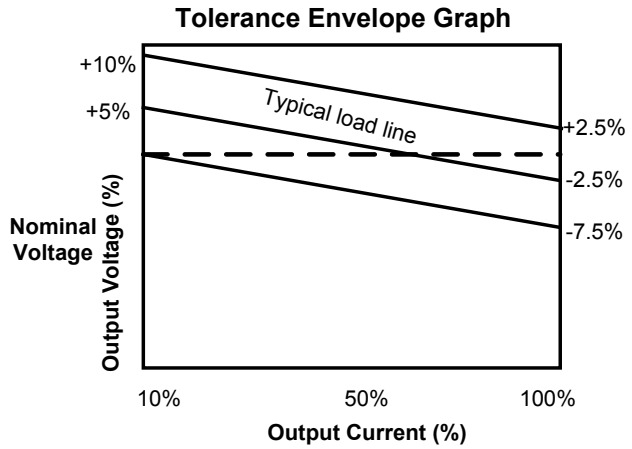
Pin	1000VDC		3000VDC	
	Single	Dual	Single	Dual
1	+ V Input	+ V Input	+ V Input	+ V Input
2	- V Input	- V Input	- V Input	- V Input
4	-V Output	- V Output	No pin	No pin
5	No pin	Common	-V Output	-V Output
6	+ V Output	+ V Output	No pin	Common
7	No pin	No pin	+V Output	+V Output

Dimensions

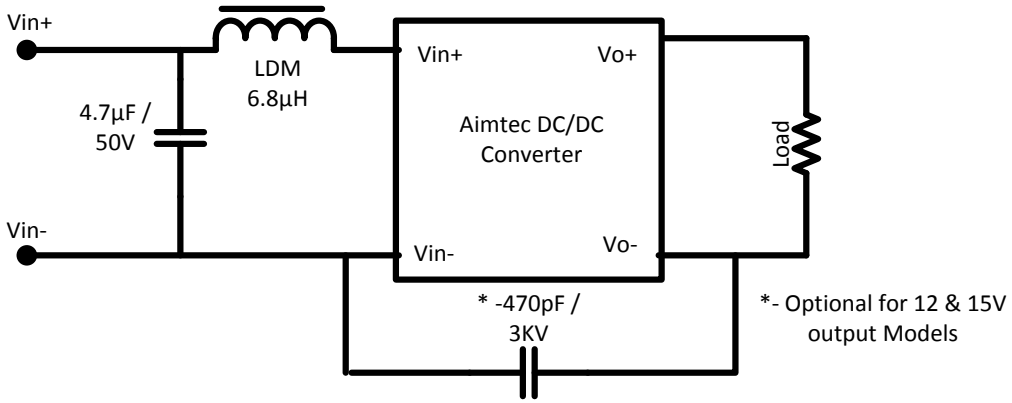


NOTE: Unit:mm [inch]
Pin tolerances: 0.10mm [0.004inch]
General tolerances: 0.25mm [0.010inch]

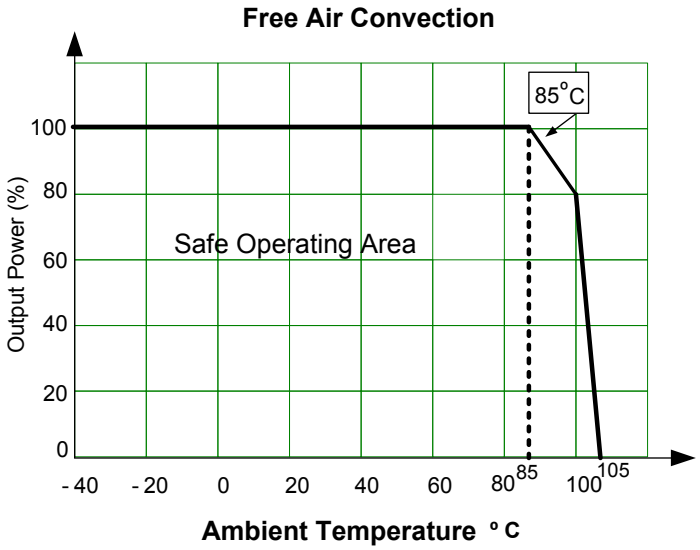
Typical characteristics



Typical EMI Filter



Derating



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