aimtec
Your Power Partner

Series AM2GW-Z
2 Watt | DC-DC Converter



FEATURES:

- SIP9 Package
- Low Ripple and Noise
- Continuous Short Circuit Protection
- -40ºC to +85ºC Operating Temperature Range
- Ultra-Wide Input Range 4:1
- 1500VDC I/O Isolation
- Efficiency up to 85%
- Remote ON / OFF Control

Models
Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current Max (mA)	Maximum Capacitive Load (µF)	Input Current Full Load | No Load (mA)		Efficiency (%)
AM2GW-2403SZ	9-36	3.3	500	2200	92	10	75
AM2GW-2405SZ	9-36	5	400	1000	103	10	81
AM2GW-2412SZ	9-36	12	165	165	100	10	84
AM2GW-2415SZ	9-36	15	135	100	98	10	85
AM2GW-4803SZ	18-75	3.3	500	2200	46	5	75
AM2GW-4805SZ	18-75	5	400	1000	53	5	80
AM2GW-4812SZ	18-75	12	165	165	50	5	84
AM2GW-4815SZ	18-75	15	135	100	50	5	84

Models
Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current Max (mA)	Maximum Capacitive Load (µF)	Input Current Full Load | No Load (mA)		Efficiency (%)
AM2GW-2405DZ	9-36	±5	±200	±470	103	10	81
AM2GW-2412DZ	9-36	±12	±85	±100	101	10	83
AM2GW-2415DZ	9-36	±15	±65	±47	102	15	82
AM2GW-4805DZ	18-75	±5	±200	±470	53	5	80
AM2GW-4812DZ	18-75	±12	±85	±100	52	5	81
AM2GW-4815DZ	18-75	±15	±65	±47	50	5	84

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	24 48	9-36 18-75		VDC
Filter	Capacitor			
Start up time		10		ms
Absolute Maximum Rating	24Vin 48Vin		50 100	VDC
Peak Input Voltage time			100	ms
On/Off Control	ON: 0 to 0.6VDC (or open) ; OFF:2.7 to 15.0VDC ,OFF: idle current: 5mA, max			
Input reflected ripple current*		20		mA p-p

* The input reflected ripple current should be measured with a 12µH inductor and a 47µF input capacitor (ESR<1Ω at 100 KHz)

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		1500	VDC
Resistance		>1000		MOhm
Capacitance		500		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy			±1	%
Cross Regulation	25% load on output - 100% load 2nd output	±5		%
Short Circuit protection	Hiccup, Continuous			
Short circuit restart	Auto-Recovery			
Transient Response Deviation			±3	%
Transient Recovery Time		300		µs
Line voltage regulation	LL~HL	±0.5		%
Load voltage regulation	From 10% to 100% load		±0.5	%
	From 0% to 100% load 12Vout and 15Vout		±0.5	%
	From 0% to 100% load 3.3Vout and 5Vout		±1	%
Ripple & Noise	20MHz Bandwidth	50		mV p-p

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	250		KHz
Operating temperature		-40 to +85		°C
Storage temperature		-40 to +125		°C
Temperature coefficient		±0.02		%/°C
Maximum case temperature			100	°C
Derating	Above 75°C	4		%/°C
Cooling	Free Air Convection			
Humidity			95	% RH
Case material	Non conductive black plastic			
Potting Material	Epoxy (UL94V-0 rated)			
Weight		6.5		g
Dimensions (L x W x H)	1.02 x 0.36 x 0.49 inches 26.00 x.9.30 x 12.50 mm			
MTBF	>1,212,000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			
Max Soldering Temperature	1.5mm from case 10 second		260	°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.

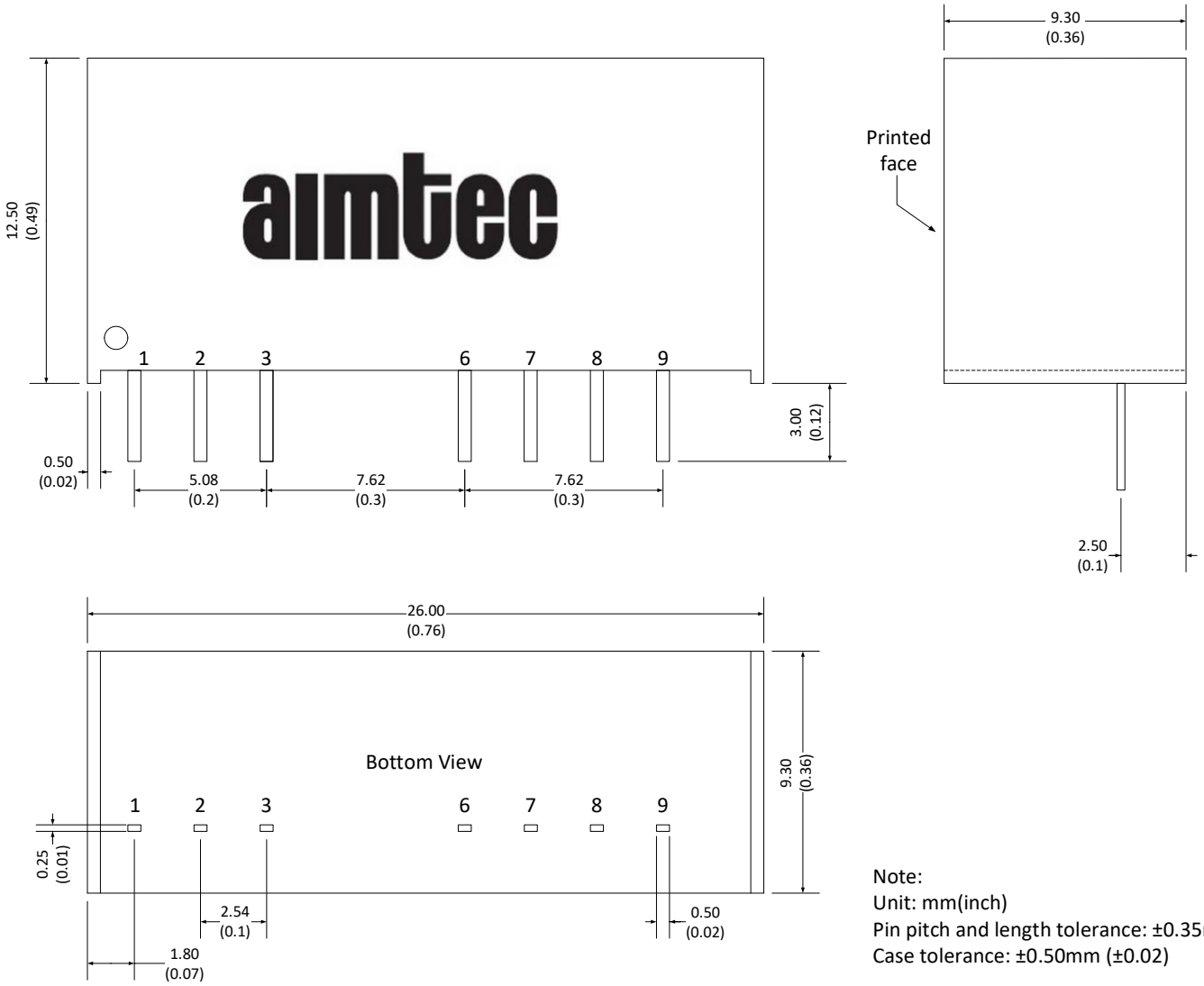
Safety Specifications

Parameters	
Agency Approval	CE, UL
Standards	UL60950-1:2001; UL62368-1
	EN55032 Class A, with the recommended circuit
	IEC61000-4-2, Perf. Criteria A
	IEC61000-4-3, Perf. Criteria A
	IEC61000-4-4, Perf. Criteria A (external 220uF/100V cap required)
	IEC61000-4-5, Perf. Criteria B (external 220uF/100V cap required)
	IEC61000-4-6, Perf. Criteria A
	IEC61000-4-8, Perf. Criteria A

Pin Out Specifications

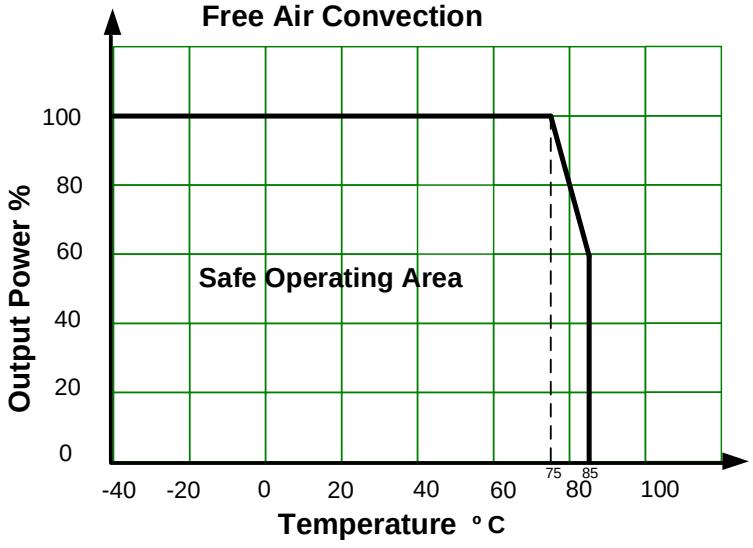
Pin	Single	Dual
1	- V Input	- V Input
2	+ V Input	+ V Input
3	On/Off Control	On/Off Control
6	+ V Output	+ V Output
7	NC	Common
8	NC	NC
9	- V Output	-V Output

Dimensions

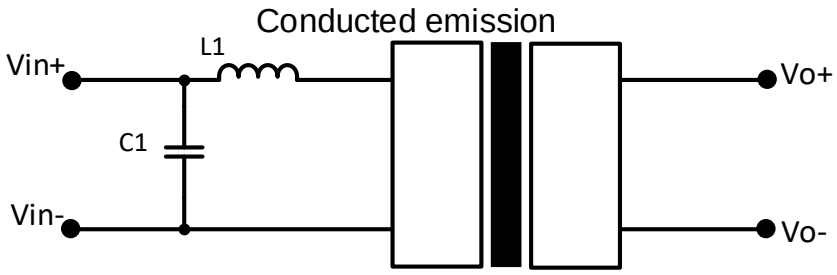


Note:
Unit: mm(inch)
Pin pitch and length tolerance: ±0.35mm (±0.014)
Case tolerance: ±0.50mm (±0.02)

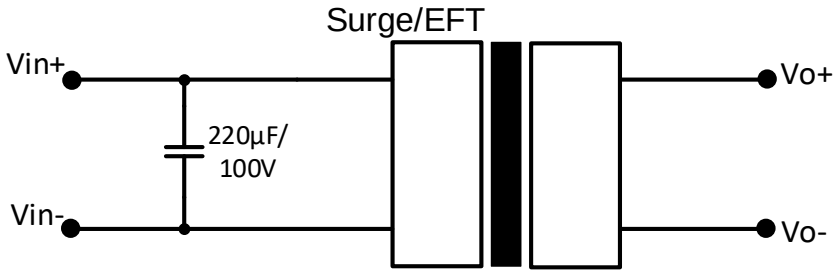
Derating



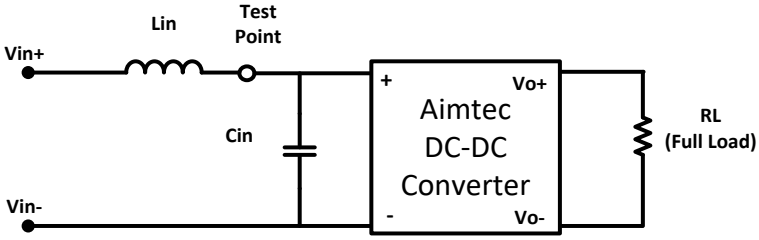
Recommended Circuits



Vin	C1	L1
24	2.2µF/100V, 2pcs	6.8µH
48	1µF/100V	56µH



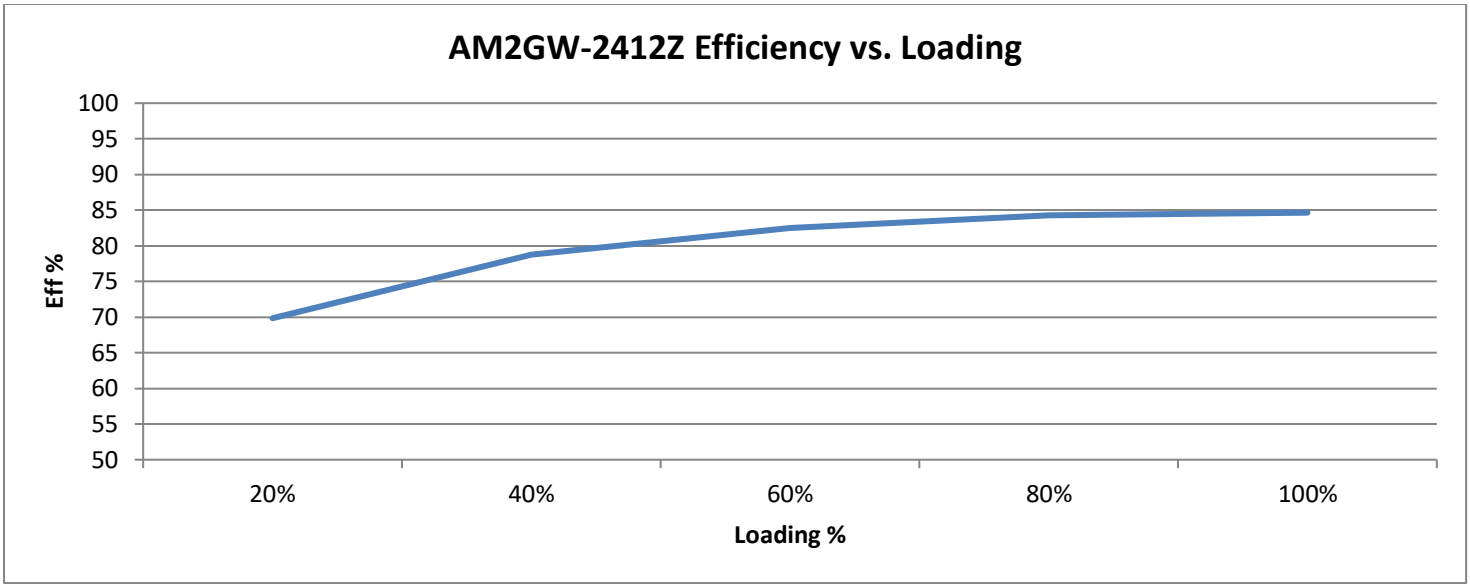
Input Reflected Ripple current:

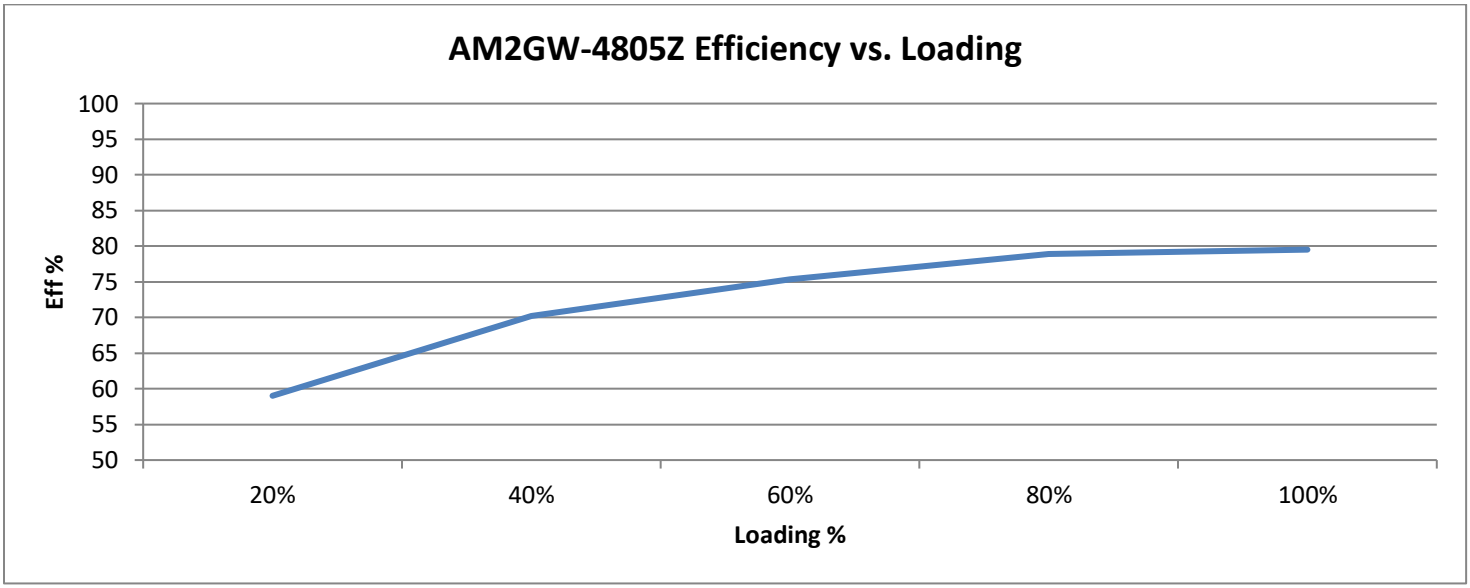


Lin	12µH
Cin	47µF, ESR<1Ω at 100KHz

Measurement taken at nominal input and full load.

Typical Efficiency Example Charts





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