



### FEATURES:

- SIP9 Package
- Low Ripple and Noise
- Continuous Short Circuit Protection
- -40°C to +85°C 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 2 <sup>nd</sup> 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 12V <sub>out</sub> and 15V <sub>out</sub>		±0.5	%
	From 0% to 100% load 3.3V <sub>out</sub> and 5V <sub>out</sub>		±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 <sub>e</sub> =+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.

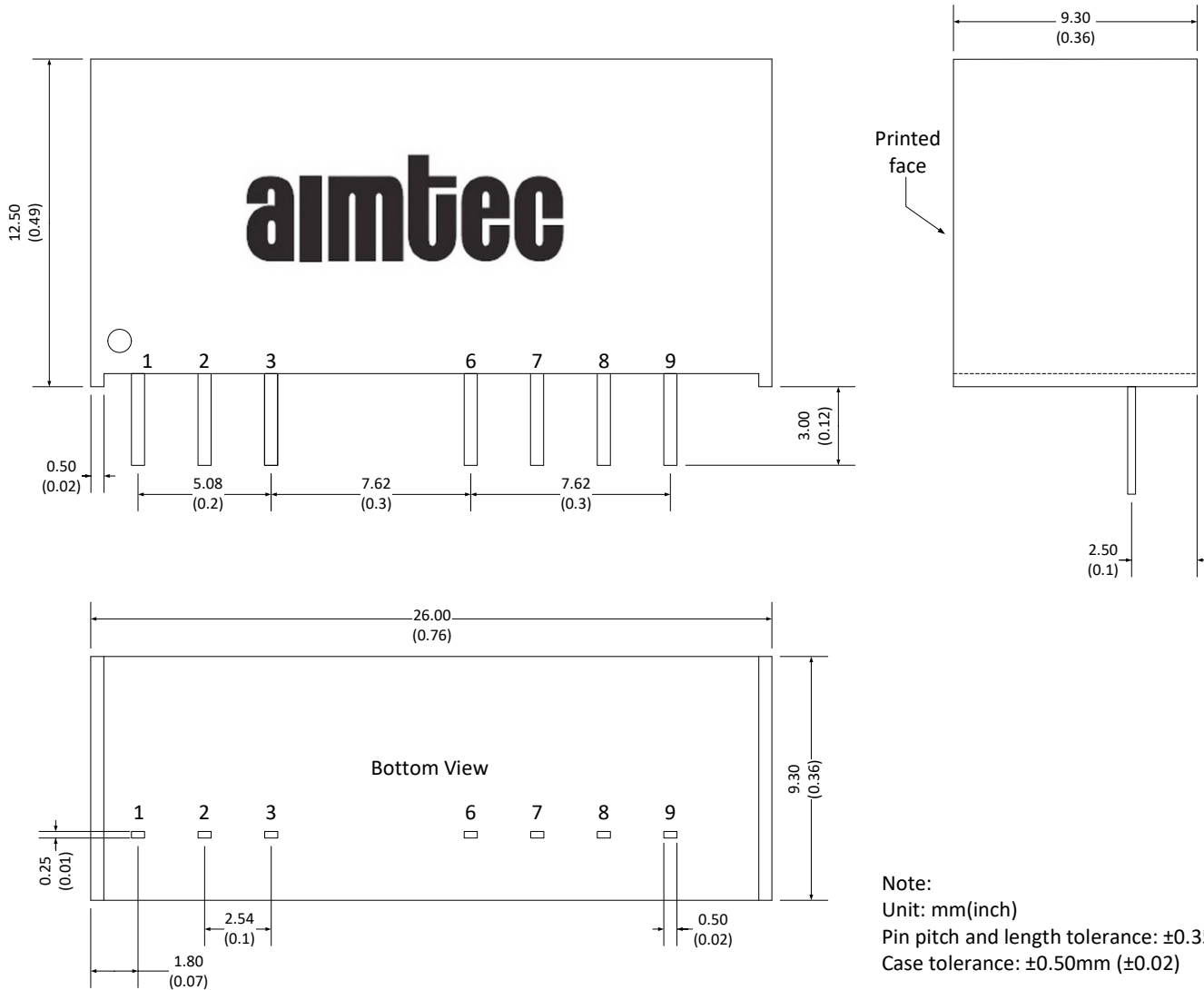
## Safety Specifications

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 220µF/100V cap required)
	IEC61000-4-5, Perf. Criteria B (external 220µF/100V cap required)
	IEC61000-4-6, Perf. Criteria A
IEC61000-4-8, Perf. Criteria A	

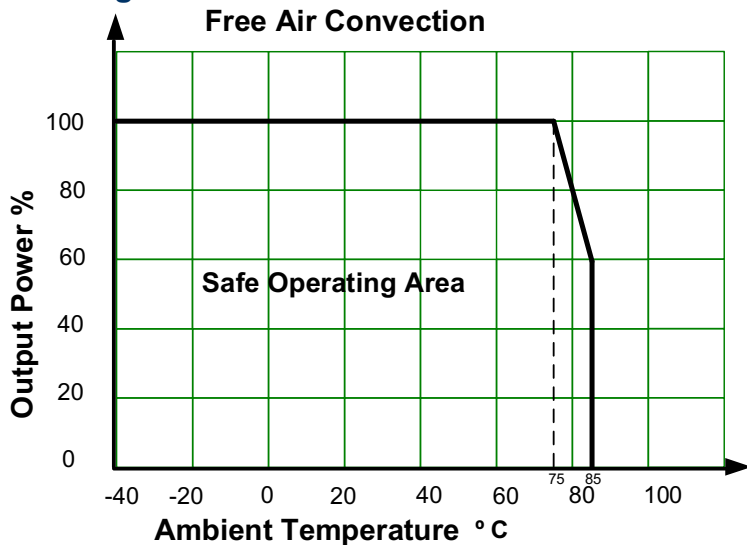
## Pin Out Specifications

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

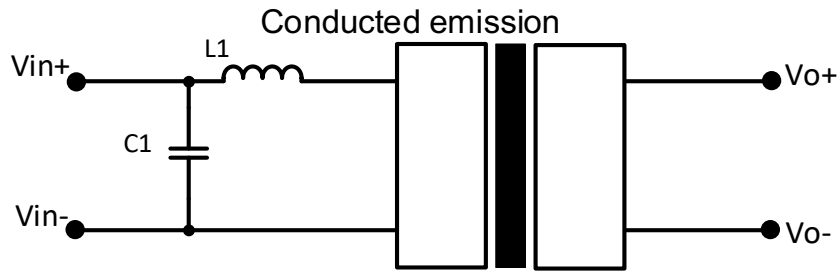
**Dimensions**



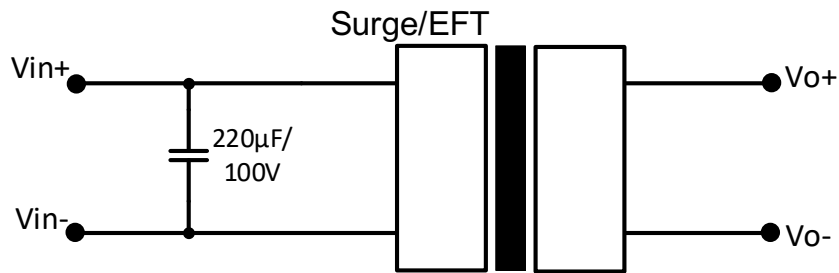
**Derating**



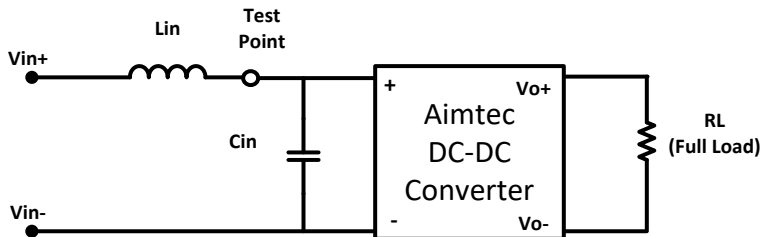
**Recommended Circuits**



Vin	C1	L1
24	2.2 $\mu$ F/100V, 2pcs	6.8 $\mu$ H
48	1 $\mu$ F/100V	56 $\mu$ H



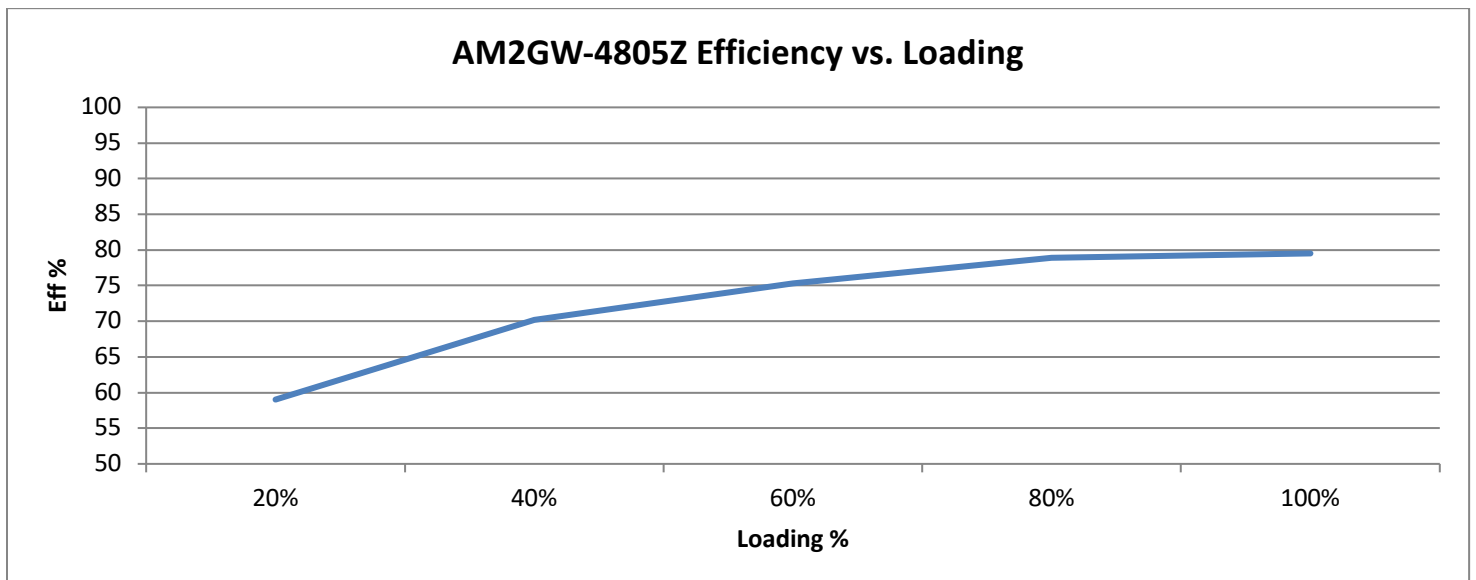
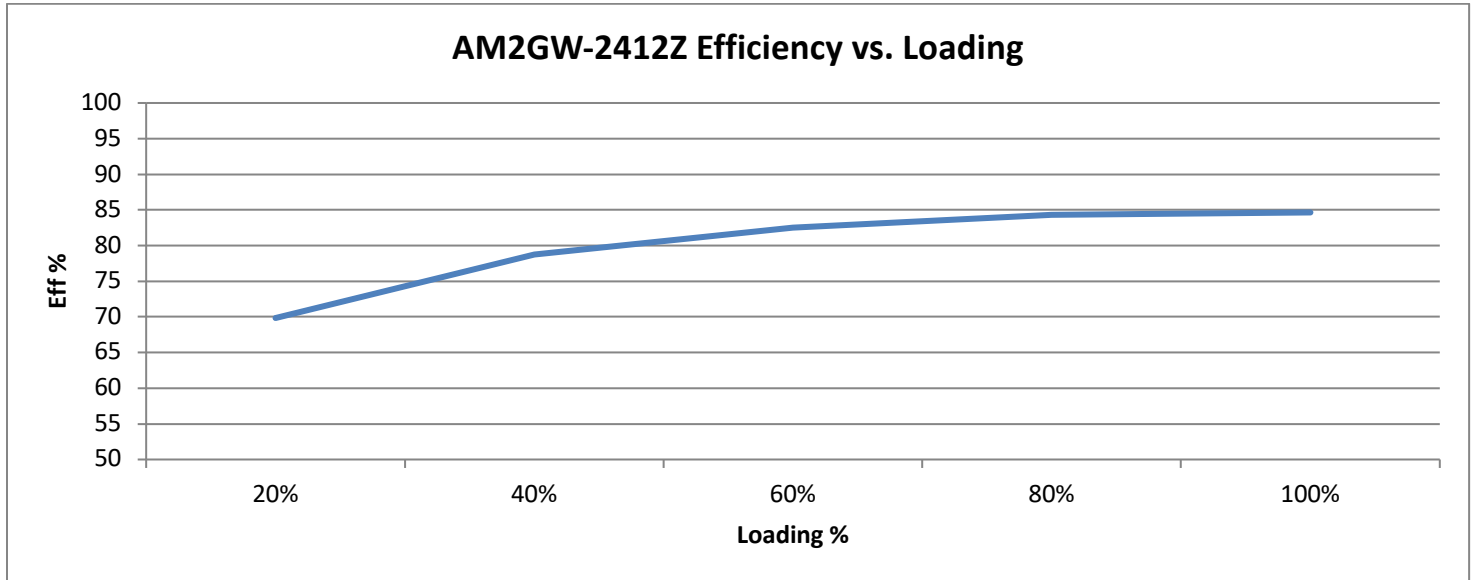
**Input Reflected Ripple current:**



<b>Lin</b>	12 $\mu$ H
<b>Cin</b>	47 $\mu$ F, ESR<1 $\Omega$ at 100KHz

Measurement taken at nominal input and full load.

### Typical Efficiency Example Charts



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