



**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 84%
- Remote ON/OFF Control



**Models**  
**Single output**

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Maximum capacitive load (µF)	Efficiency (%)
AM3GW-2403SZ	9-36	3.3	700	2200	77
AM3GW-2405SZ	9-36	5	600	1000	82
AM3GW-2412SZ	9-36	12	250	165	83
AM3GW-2415SZ	9-36	15	200	100	83
AM3GW-4803SZ	18-75	3.3	700	2200	78
AM3GW-4805SZ	18-75	5	600	1000	84
AM3GW-4812SZ	18-75	12	250	165	84
AM3GW-4815SZ	18-75	15	200	100	82

**Models**  
**Dual output**

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Maximum capacitive load (µF)	Efficiency (%)
AM3GW-2405DZ	9-36	±5	±300	±470	81
AM3GW-2412DZ	9-36	±12	±125	±100	84
AM3GW-2415DZ	9-36	±15	±100	±47	83
AM3GW-4805DZ	18-75	±5	±300	±470	82
AM3GW-4812DZ	18-75	±12	±125	±100	82
AM3GW-4815DZ	18-75	±15	±100	±47	83

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.

**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	24 48		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

**Isolation Specifications**

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	3 sec		1500	VDC
Resistance		>1000		MOhm
Capacitance		500		pF

## Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±1		%
Cross Regulation (Dual Output Models)	25% load on one output - 100% load on second load	±5		%
Short Circuit protection	Hiccup		Continuous	
Short circuit restart	Auto-Recovery			
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
Transient Response Deviation		±3		%
Transient Recovery Time		300		µs

## 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	3.5		%/°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	25.91 x 9.14 x 12.44 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

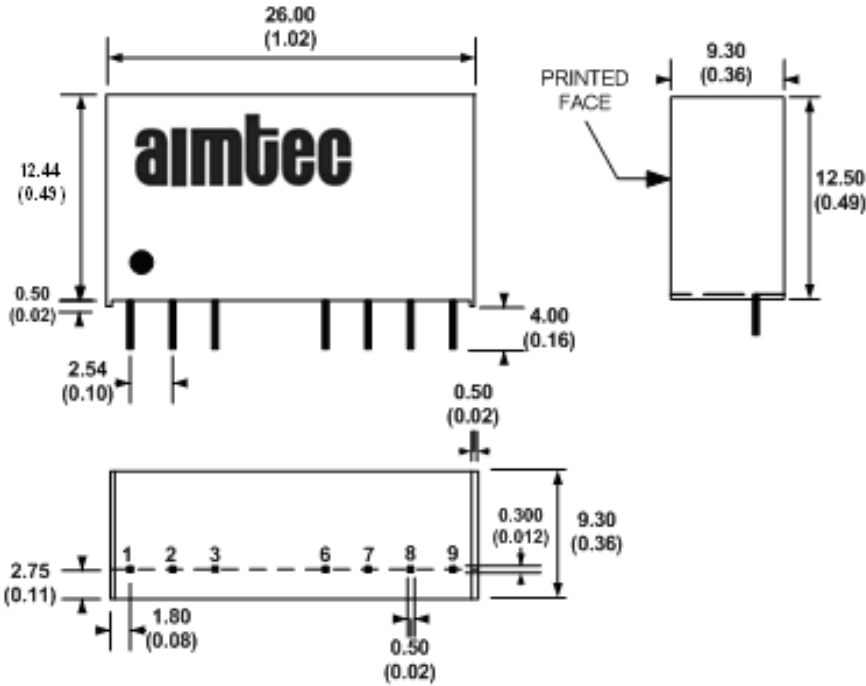
## Safety Specifications

Parameters	
Agency Approval	CE
Standards	EN55022 Class A,
	IEC61000-4-2, Perf. Criteria B
	IEC61000-4-3, Perf. Criteria A
	IEC61000-4-4, Perf. Criteria B (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
	NOTE: designed to meet IEC 60950-1:2001

## Pin Out Specifications

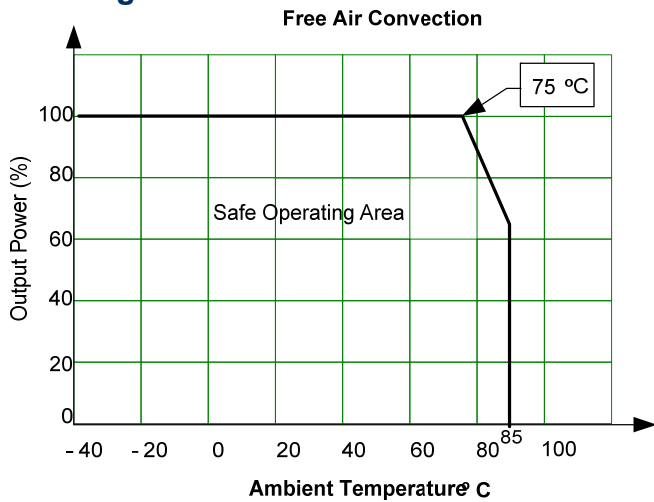
Pin	Single	Dual
1	- V Input	- V Input
2	+ V Input	+ V Input
3	On/Off Control	On/Off Control
6	+ V Output	+ V Output
7	NC	Common
8	NC	NC
9	- V Output	-V Output

**Dimensions**



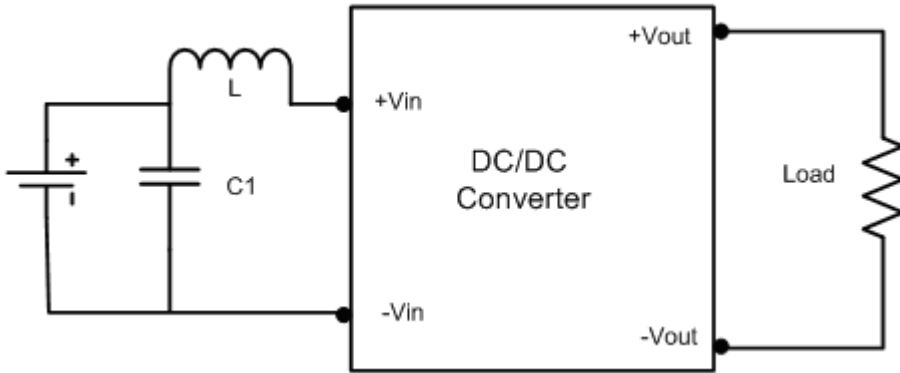
All dimensions are in millimeters (inches)  
 Pin diameter: 1.0 ±0.05 ( 0.04 ±0.002 )  
 Pin pitch tolerance: ±0.35 ( ±0.014 )  
 Case Tolerance: ±0.5 ( ±0.02 )

**Derating**



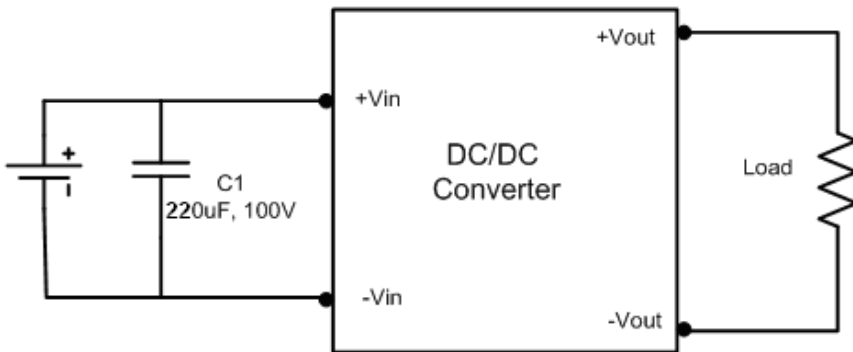
**Test Circuits**

**Conducted Emissions:**

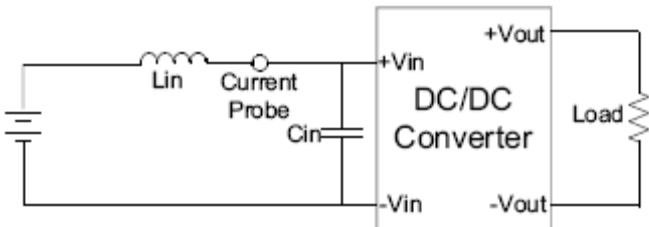


Models	C1	L1
AM2GW-24XX-Z	1210,225K/100V,X7R, 2pcs	6.8 $\mu$ H
AM2GW-48XX-Z	1210,105k/100V,X7R	56 $\mu$ H

**Surge:**



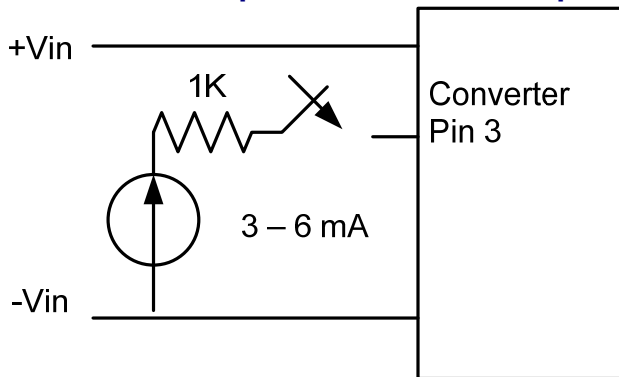
**Input Reflected Ripple current:**



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

Measurement taken at nominal input and full load.

Control ON/OFF pin connection example:



The voltage could be applied through a limiting resistor. The converter is turned on the external switching circuit is open.

**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).