

**FEATURES:**

- SIP8 Package
- Low Ripple and Noise
- Continuous Short Circuit Protection
- -40°C to +85°C Operating Temperature Range
- Ultra-Wide Input Range 4:1
- 1600 VDC I/O Isolation
- Efficiency up to 79%
- 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 (%)
AM2GH-1203SZ	4.5-18	3.3	500	1000	196	40	70
AM2GH-1205SZ	4.5-18	5	400	1000	225	40	74
AM2GH-1212SZ	4.5-18	12	166	220	213	40	78
AM2GH-1215SZ	4.5-18	15	133	100	213	40	78
AM2GH-2403SZ	9-36	3.3	500	1000	96	25	71
AM2GH-2405SZ	9-36	5	400	1000	106	20	78
AM2GH-2412SZ	9-36	12	166	220	105	30	79
AM2GH-2415SZ	9-36	15	133	100	105	30	79
AM2GH-4803SZ	18-75	3.3	500	1000	47	10	72
AM2GH-4805SZ	18-75	5	400	1000	55	15	75
AM2GH-4812SZ	18-75	12	166	220	55	15	75
AM2GH-4815SZ	18-75	15	133	100	54	15	76

### 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 (%)
AM2GH-1205DZ	4.5-18	±5	±200	±470	219	30	77
AM2GH-1212DZ	4.5-18	±12	±83	±100	213	30	78
AM2GH-1215DZ	4.5-18	±15	±66	±47	216	40	77
AM2GH-2405DZ	9-36	±5	±200	±470	111	30	75
AM2GH-2412DZ	9-36	±12	±83	±100	108	30	77
AM2GH-2415DZ	9-36	±15	±66	±47	106	30	78
AM2GH-4805DZ	18-75	±5	±200	±470	56	15	74
AM2GH-4812DZ	18-75	±12	±83	±100	56	15	74
AM2GH-4815DZ	18-75	±15	±66	±47	55	15	75

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	12 24 48	4.5-18 9-36 18-75		VDC
Filter	Capacitor			
Start up time		30		ms
Absolute Maximum Rating	12 24 48		25 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: 2-4mA			
No Load Input Current			40	mA
Input reflected current		20		mA

### Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		1600	VDC
Resistance		>1000		MOhm
Capacitance		200		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		Continuous		
Short circuit restart		Auto-Recovery		
Line voltage regulation		±0.2		%
Load voltage regulation	From 0% to 100% load	±1		%
Temperature coefficient		±0.02		%/°C
Ripple & Noise	20MHz Bandwidth	30		mV p-p

### General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	100		KHz
Operating temperature		-40 to 85		°C
Storage temperature		-40 to +125		°C
Maximum case temperature			100	°C
Derating	Above 71°C	5		%/°C
Cooling		Free Air Convection		
Humidity			95	% RH
Case material		Non conductive black plastic		
Potting Material		Silicon (UL94V-0 rated)		
Weight		4.8		g
Dimensions (L x W x H)		0.86 x 0.36 x 0.44 inches	21.85 x 9.20 x 11.10 mm	
MTBF		>1,700,000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)hours		
Maximum soldering temperature	1.5mm from case for 10 second		260	°C
Transient recovery time		250		µS
Transient recovery deviation		±3		%

### Safety Specifications

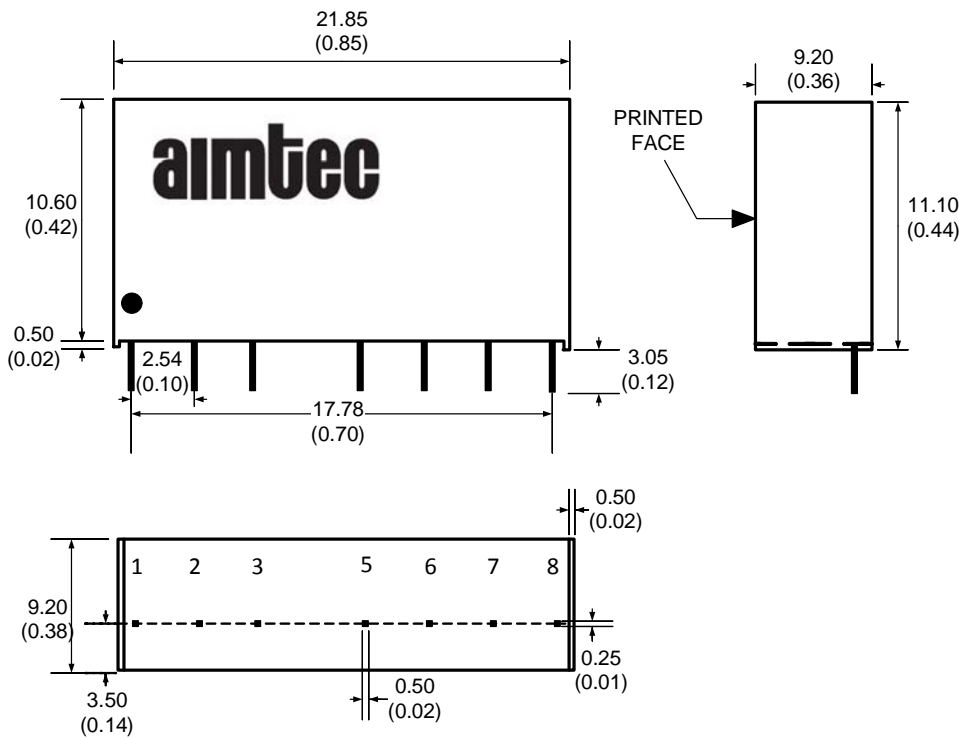
Parameter	
Agency Approvals	CE
Standards	EN55022: 2006 + A1:2007, Class A
	EN55024:1998 + A1:2001 + A2:2003
	IEC61000-4-2:1995 + A1:1998 + A2:2000, Perf. Criteria B
	IEC61000-4-3:2006, Perf. Criteria A
	IEC61000-4-4:2004, Perf. Criteria B (external 220µF/100V cap required)
	IEC61000-4-5:2005, Perf. Criteria B (external 220µF/100V cap required)
	IEC61000-4-6:2007, Perf. Criteria A
	IEC61000-4-8, Perf:1993 + A1:2000, Criteria A
	NOTE: Also designed to meet IEC 60950-1:2001

### Pin Out Specifications

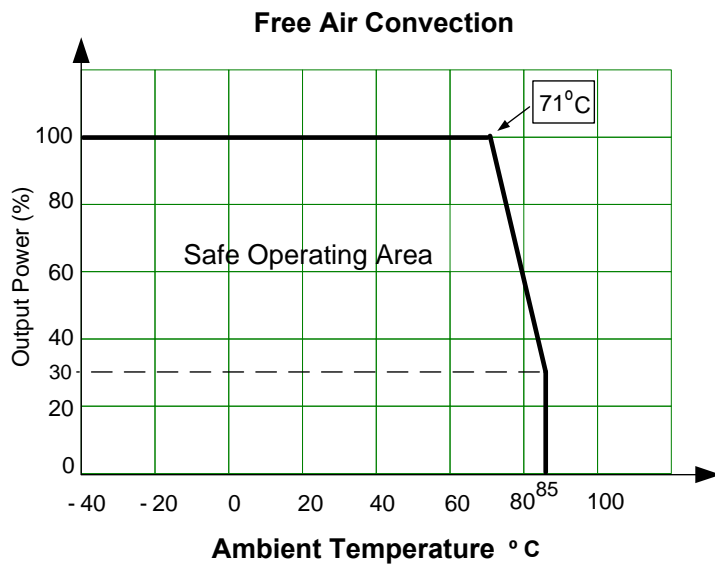
Pin	Single	Dual
1	- V Input	- V Input
2	+ V Input	+ V Input
3	On/Off Control	On/Off Control
5	N.C.	N.C.
6	+ V Output	+ V Output
7	- V Output	Common
8	N.C.	- V Output

NC: Not Connected

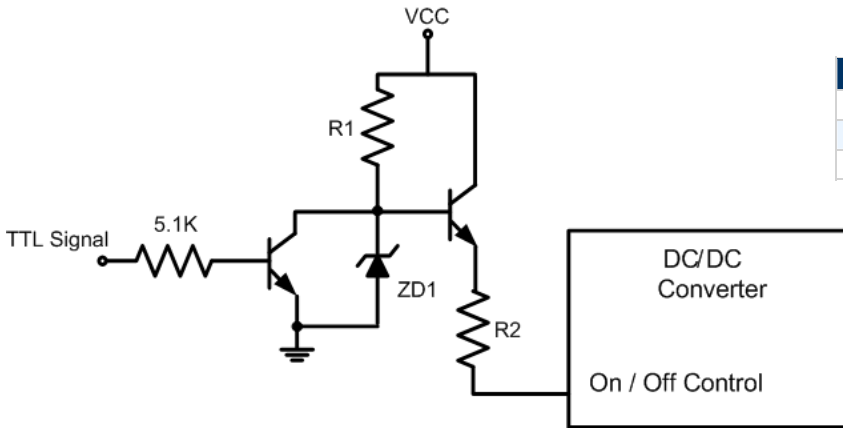
### Dimensions



### Derating



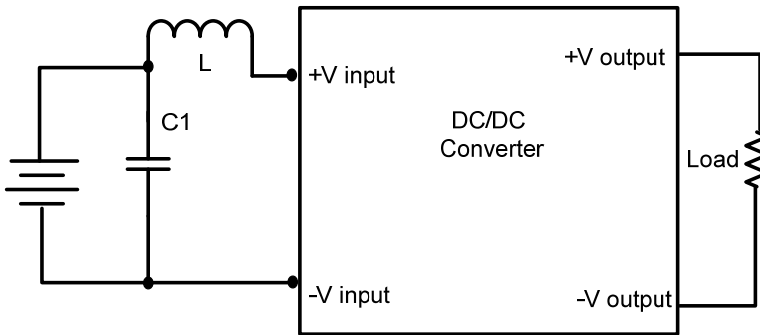
**Control ON/OFF pin connection example**



VCC (VDC)	R1 (KΩ)	R2(KΩ)	ZD1(V , mA)
4.5 -18	7.5	0	10, 5
9 - 36	18	2.2	18, 5
18 - 75	33	6.8	36, 5

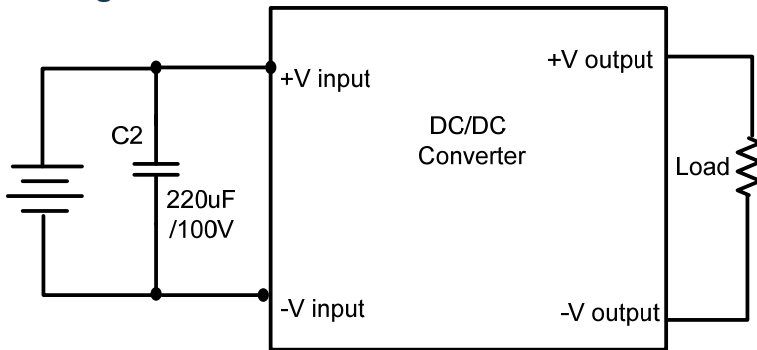
**Recommended Circuits**

**Conducted and Radiated Emissions**

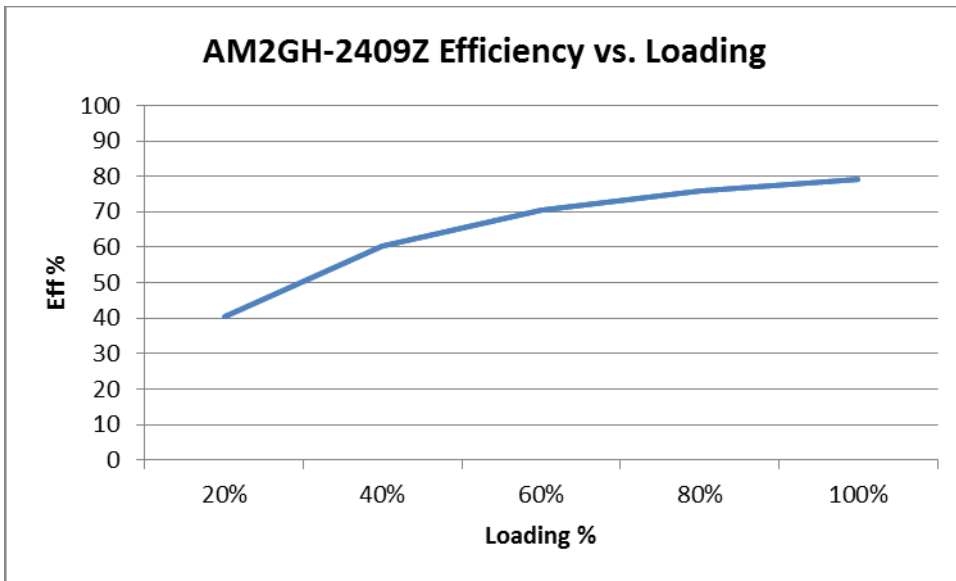
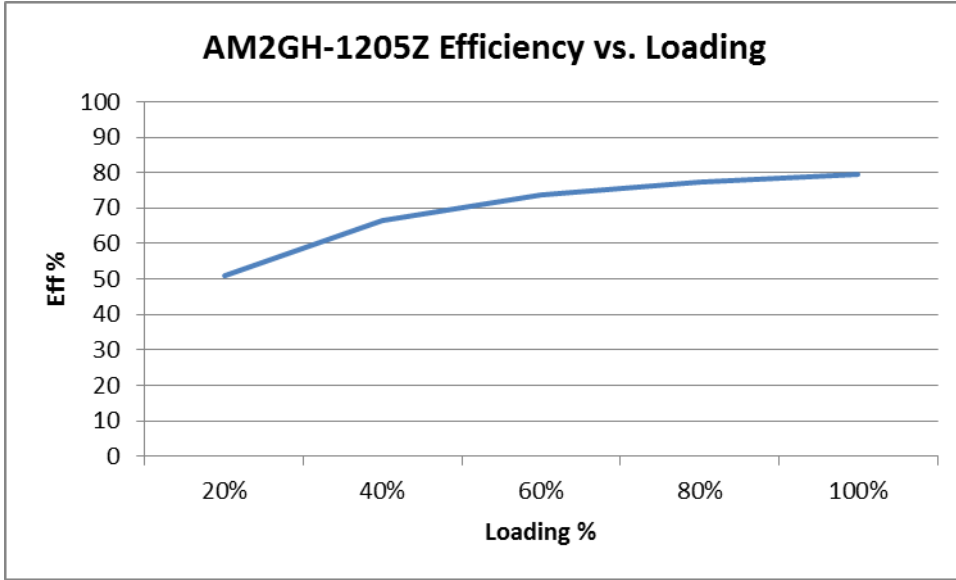


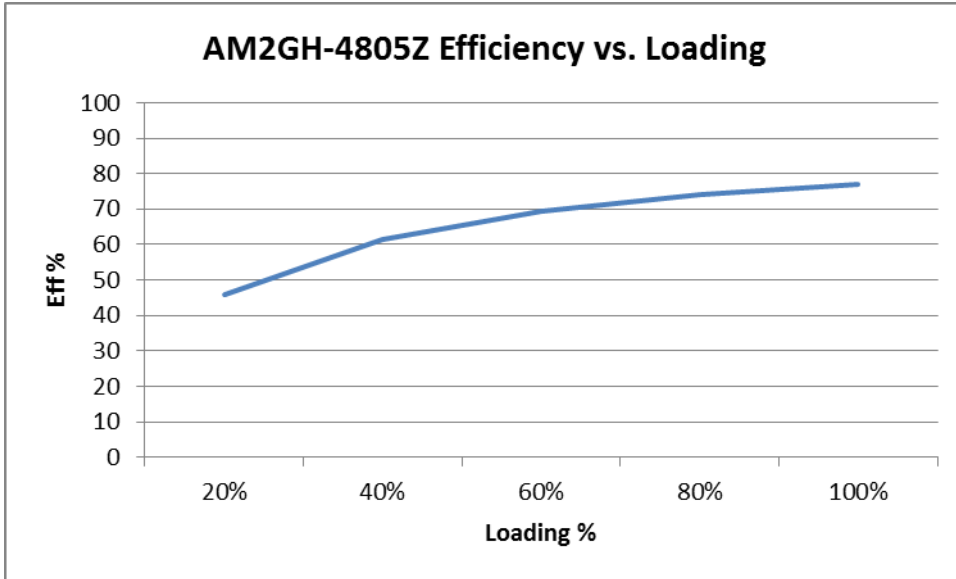
Input Voltage (V)	C1 (uF/V)	L(uH)
12	10/35	2.5
24	2.2/35	10
48	2.2/35	18

**EFT / Surge**



**Typical Efficiency Example Charts**





**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).