



FEATURES:

- Regulated
- High Efficiency up to 80%
- Remote On/Off Control
- 8Pin SIP Package
- Operating Temperature -40°C to +85°C
- Continuous Short Circuit Protection
- Wide 2:1 Input Range
- Input / Output Isolation 1000 & 3000VDC



Models Single Output

Model	Input Voltage (V)	Output Voltage (V)	Output Current Max (mA)	Isolation (VDC)	Capacitor Load (µF)	Input Current Full Load No Load (mA)	Efficiency (%)
AM2G-0503SZ	4.5-9	3.3	500	1000	3300	492 15	67
AM2G-0505SZ	4.5-9	5	400	1000	3300	571 15	70
AM2G-0507SZ	4.5-9	7.2	278	1000	470	560 15	72
AM2G-0509SZ	4.5-9	9	222	1000	470	555 30	72
AM2G-0512SZ	4.5-9	12	167	1000	470	555 30	73
AM2G-0515SZ	4.5-9	15	133	1000	470	547 30	75
AM2G-0518SZ	4.5-9	18	111	1000	220	540 30	67
AM2G-0524SZ	4.5-9	24	83	1000	220	533 60	77
AM2G-1203SZ	9-18	3.3	500	1000	3300	205 15	78
AM2G-1205SZ	9-18	5	400	1000	3300	216 15	80
AM2G-1207SZ	9-18	7.2	278	1000	470	215 15	78
AM2G-1209SZ	9-18	9	222	1000	470	213 15	80
AM2G-1212SZ	9-18	12	167	1000	470	208 15	70
AM2G-1215SZ	9-18	15	133	1000	470	213 15	77
AM2G-1218SZ	9-18	18	111	1000	220	210 15	80
AM2G-1224SZ	9-18	24	83	1000	220	208 15	80
AM2G-2403SZ	18-36	3.3	500	1000	3300	98 8	80
AM2G-2405SZ	18-36	5	400	1000	3300	108 8	80
AM2G-2407SZ	18-36	7.2	278	1000	470	106 8	71
AM2G-2409SZ	18-36	9	222	1000	470	104 8	74
AM2G-2412SZ	18-36	12	167	1000	470	104 8	78
AM2G-2415SZ	18-36	15	133	1000	470	104 8	78
AM2G-2418SZ	18-36	18	111	1000	220	104 8	78
AM2G-2424SZ	18-36	24	83	1000	220	104 8	80
AM2G-4803SZ	36-72	3.3	500	1000	3300	48 6	67
AM2G-4805SZ	36-72	5	400	1000	3300	56 6	70
AM2G-4807SZ	36-72	7.2	278	1000	470	55 6	72
AM2G-4809SZ	36-72	9	222	1000	470	53 6	72
AM2G-4812SZ	36-72	12	167	1000	470	53 6	73
AM2G-4815SZ	36-72	15	133	1000	470	53 6	75
AM2G-4818SZ	36-72	18	111	1000	220	53 6	67
AM2G-4824SZ	36-72	24	83	1000	220	52 6	77
AM2G-0503SH30Z	4.5-9	3.3	500	3000	3300	492 15	67
AM2G-0505SH30Z	4.5-9	5	400	3000	3300	571 15	70
AM2G-0507SH30Z	4.5-9	7.2	278	3000	470	560 15	72
AM2G-0509SH30Z	4.5-9	9	222	3000	470	555 30	72
AM2G-0512SH30Z	4.5-9	12	167	3000	470	555 30	73
AM2G-0515SH30Z	4.5-9	15	133	3000	470	547 30	75
AM2G-0518SH30Z	4.5-9	18	111	3000	220	540 30	67
AM2G-0524SH30Z	4.5-9	24	83	3000	220	533 60	77
AM2G-1203SH30Z	9-18	3.3	500	3000	3300	205 15	78
AM2G-1205SH30Z	9-18	5	400	3000	3300	216 15	80
AM2G-1207SH30Z	9-18	7.2	278	3000	470	215 15	78
AM2G-1209SH30Z	9-18	9	222	3000	470	213 15	80
AM2G-1212SH30Z	9-18	12	167	3000	470	208 15	70

Models

Single Output (continued)

Model	Input Voltage (V)	Output Voltage (V)	Output Current Max (mA)	Isolation (VDC)	Capacitor Load (µF)	Input Current Full Load No Load (mA)		Efficiency (%)
AM2G-1215SH30Z	9-18	15	133	3000	470	213	15	77
AM2G-1218SH30Z	9-18	18	111	3000	220	210	15	80
AM2G-1224SH30Z	9-18	24	83	3000	220	208	15	80
AM2G-2403SH30Z	18-36	3.3	500	3000	3300	98	8	80
AM2G-2405SH30Z	18-36	5	400	3000	3300	108	8	80
AM2G-2407SH30Z	18-36	7.2	278	3000	470	106	8	71
AM2G-2409SH30Z	18-36	9	222	3000	470	104	8	74
AM2G-2412SH30Z	18-36	12	167	3000	470	104	8	78
AM2G-2415SH30Z	18-36	15	133	3000	470	104	8	78
AM2G-2418SH30Z	18-36	18	111	3000	220	104	8	78
AM2G-2424SH30Z	18-36	24	83	3000	220	104	8	80
AM2G-4803SH30Z	36-72	3.3	500	3000	3300	48	6	67
AM2G-4805SH30Z	36-72	5	400	3000	3300	56	6	70
AM2G-4807SH30Z	36-72	7.2	278	3000	470	55	6	72
AM2G-4809SH30Z	36-72	9	222	3000	470	53	6	72
AM2G-4812SH30Z	36-72	12	167	3000	470	53	6	73
AM2G-4815SH30Z	36-72	15	133	3000	470	53	6	75
AM2G-4818SH30Z	36-72	18	111	3000	220	53	6	67
AM2G-4824SH30Z	36-72	24	83	3000	220	52	6	77

Models

Dual Output

Model	Input Voltage (V)	Output Voltage (V)	Output Current Max (mA)	Isolation (VDC)	Capacitor Load (µF)	Input Current Full Load No Load (mA)		Efficiency (%)
AM2G-0503DZ	4.5-9	±3.3	±250	1000	±1000	492	15	70
AM2G-0505DZ	4.5-9	±5	±200	1000	±1000	571	15	70
AM2G-0507DZ	4.5-9	±7.2	±139	1000	±470	560	15	74
AM2G-0509DZ	4.5-9	±9	±111	1000	±470	555	30	75
AM2G-0512DZ	4.5-9	±12	±83	1000	±470	555	30	75
AM2G-0515DZ	4.5-9	±15	±67	1000	±470	547	30	71
AM2G-0518DZ	4.5-9	±18	±56	1000	±220	540	30	73
AM2G-0524DZ	4.5-9	±24	±42	1000	±220	533	60	75
AM2G-1203DZ	9-18	±3.3	±250	1000	±1000	205	15	79
AM2G-1205DZ	9-18	±5	±200	1000	±1000	216	15	80
AM2G-1207DZ	9-18	±7.2	±139	1000	±470	215	15	79
AM2G-1209DZ	9-18	±9	±111	1000	±470	213	15	76
AM2G-1212DZ	9-18	±12	±83	1000	±470	208	15	73
AM2G-1215DZ	9-18	±15	±67	1000	±470	213	15	78
AM2G-1218DZ	9-18	±18	±56	1000	±220	210	15	79
AM2G-1224DZ	9-18	±24	±42	1000	±220	208	15	80
AM2G-2403DZ	18-36	±3.3	±250	1000	±1000	98	8	80
AM2G-2405DZ	18-36	±5	±200	1000	±1000	108	8	78
AM2G-2407DZ	18-36	±7.2	±139	1000	±470	106	8	73
AM2G-2409DZ	18-36	±9	±111	1000	±470	104	8	74
AM2G-2412DZ	18-36	±12	±83	1000	±470	104	8	79
AM2G-2415DZ	18-36	±15	±67	1000	±470	104	8	79
AM2G-2418DZ	18-36	±18	±56	1000	±220	104	8	80
AM2G-2424DZ	18-36	±24	±42	1000	±220	104	8	75
AM2G-4803DZ	36-72	±3.3	±250	1000	±1000	48	6	70
AM2G-4805DZ	36-72	±5	±200	1000	±1000	56	6	70
AM2G-4807DZ	36-72	±7.2	±139	1000	±470	55	6	74
AM2G-4809DZ	36-72	±9	±111	1000	±470	53	6	75
AM2G-4812DZ	36-72	±12	±83	1000	±470	53	6	75

Models

Dual Output (continued)

Model	Input Voltage (V)	Output Voltage (V)	Output Current Max (mA)	Isolation (VDC)	Capacitor Load (µF)	Input Current Full Load No Load (mA)		Efficiency (%)
AM2G-4815DZ	36-72	±15	±67	1000	±470	53	6	71
AM2G-4818DZ	36-72	±18	±56	1000	±220	53	6	73
AM2G-4824DZ	36-72	±24	±42	1000	±220	53	6	75
AM2G-0503DH30Z	4.5-9	±3.3	±250	3000	±1000	492	15	70
AM2G-0505DH30Z	4.5-9	±5	±200	3000	±1000	571	15	70
AM2G-0507DH30Z	4.5-9	±7.2	±139	3000	±470	560	15	74
AM2G-0509DH30Z	4.5-9	±9	±111	3000	±470	555	30	75
AM2G-0512DH30Z	4.5-9	±12	±83	3000	±470	555	30	75
AM2G-0515DH30Z	4.5-9	±15	±67	3000	±470	547	30	71
AM2G-0518DH30Z	4.5-9	±18	±56	3000	±220	540	30	73
AM2G-0524DH30Z	4.5-9	±24	±42	3000	±220	533	60	75
AM2G-1203DH30Z	9-18	±3.3	±250	3000	±1000	205	15	79
AM2G-1205DH30Z	9-18	±5	±200	3000	±1000	216	15	80
AM2G-1207DH30Z	9-18	±7.2	±139	3000	±470	215	15	79
AM2G-1209DH30Z	9-18	±9	±111	3000	±470	213	15	76
AM2G-1212DH30Z	9-18	±12	±83	3000	±470	208	15	73
AM2G-1215DH30Z	9-18	±15	±67	3000	±470	213	15	78
AM2G-1218DH30Z	9-18	±18	±56	3000	±220	210	15	79
AM2G-1224DH30Z	9-18	±24	±42	3000	±220	208	15	80
AM2G-2403DH30Z	18-36	±3.3	±250	3000	±1000	98	8	80
AM2G-2405DH30Z	18-36	±5	±200	3000	±1000	108	8	78
AM2G-2407DH30Z	18-36	±7.2	±139	3000	±470	106	8	73
AM2G-2409DH30Z	18-36	±9	±111	3000	±470	104	8	74
AM2G-2412DH30Z	18-36	±12	±83	3000	±470	104	8	79
AM2G-2415DH30Z	18-36	±15	±67	3000	±470	104	8	79
AM2G-2418DH30Z	18-36	±18	±56	3000	±220	104	8	80
AM2G-2424DH30Z	18-36	±24	±42	3000	±220	104	8	75
AM2G-4803DH30Z	36-72	±3.3	±250	3000	±1000	48	6	70
AM2G-4805DH30Z	36-72	±5	±200	3000	±1000	56	6	70
AM2G-4807DH30Z	36-72	±7.2	±139	3000	±470	55	6	74
AM2G-4809DH30Z	36-72	±9	±111	3000	±470	53	6	75
AM2G-4812DH30Z	36-72	±12	±83	3000	±470	53	6	75
AM2G-4815DH30Z	36-72	±15	±67	3000	±470	53	6	71
AM2G-4818DH30Z	36-72	±18	±56	3000	±220	53	6	73
AM2G-4824DH30Z	36-72	±24	±42	3000	±220	53	6	75

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	5	4.5-9		VDC
	12	9-18		
	24	18-36		
	48	36-72		
Filter	Capacitor			
Input Reflected Ripple Current		35		mA p-p
Turn on Transient process time			350	ms
Start-up time		200		ms
Absolute Maximum Rating	5 Vin	-0.7-12		VDC
	12 Vin	-0.7-24		
	24 Vin	-0.7-40		
	48 Vin	-0.7-80		

Peak Input Voltage time		100		ms
On/Off Control	ON – low or open (0Vdc to 0.8Vdc)			
	OFF – high (4.5Vdc to 15Vdc, OFF idle current:3.5mA to 15mA Max.)			

Isolation Specifications

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

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2		%
Cross Regulation (Dual Output Models)	25% load on output - 100% load 2nd output	±5		%
Short Circuit protection		Continuous		
Short Circuit restart		Auto recovery		
Line voltage regulation	LL~HL	±0.5		%
Load voltage regulation	load 25~100%	±1		%
Temperature coefficient		±0.02		%/°C
Ripple & Noise*	At 20MHz Bandwidth	80		mV p-p
Rising time		50		ms

* The ripple and noise should be measured with connected 47µF capacitor and 0.1µF ceramic capacitor on the output of the converter. In order to achieve ripple and noise specification, a 100µF capacitor is required to be connected to the output of the converter

General Specifications

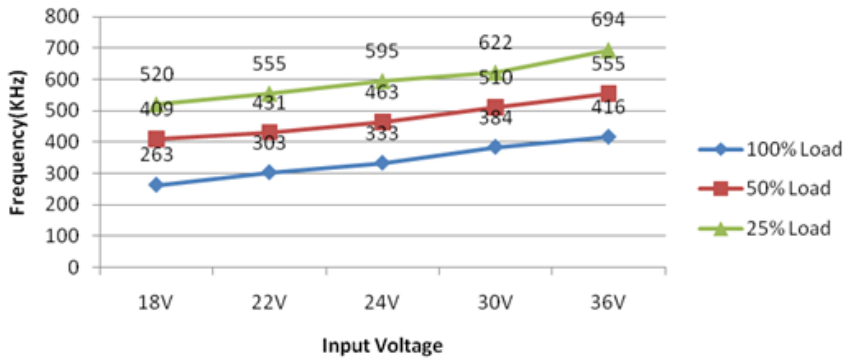
Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	>100	650	KHz
Operating temperature		-40 to +85		°C
Storage temperature		-40 to +125		°C
Max Case temperature			+100	°C
Cooling		Free air convection		
Humidity			95	%
Case material		Non-conductive black plastic (UL94V-0 rated)		
Weight		3.96		g
Dimensions (L x W x H)		0.86 x 0.36 x 0.44 inch	21.85 x 9.20 x 10.60 mm	
MTBF		>1 610 000 hrs (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 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

Switching Frequency vs Input Voltage and Load

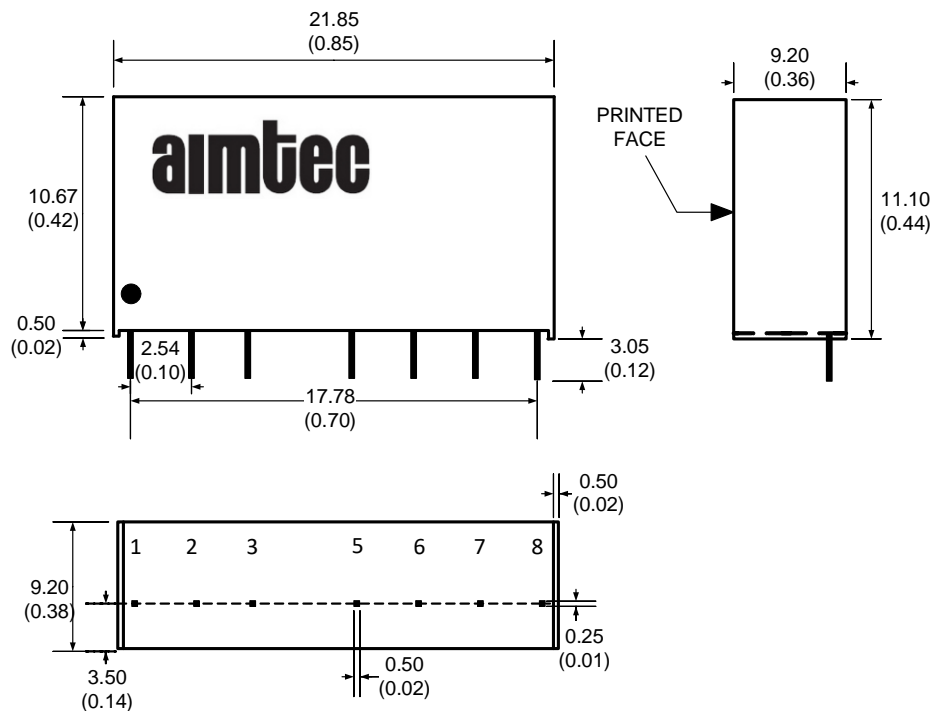


Pin Out Specification

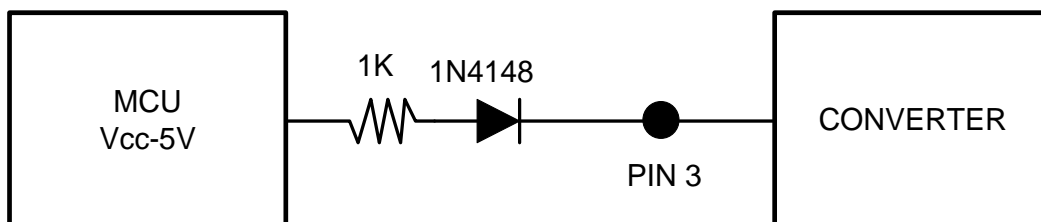
Pin	1000 & 3000VDC	
	Single	Dual
1	- V Input	- V Input
2	+ V Input	+ V Input
3	On/Off Control	On/Off Control
5	N.C.	N.C.
6	+ V Output	+ V Output
7	- V Output	Common
8	N.C.	- V Output

N.C.: Not Connected

Dimensions

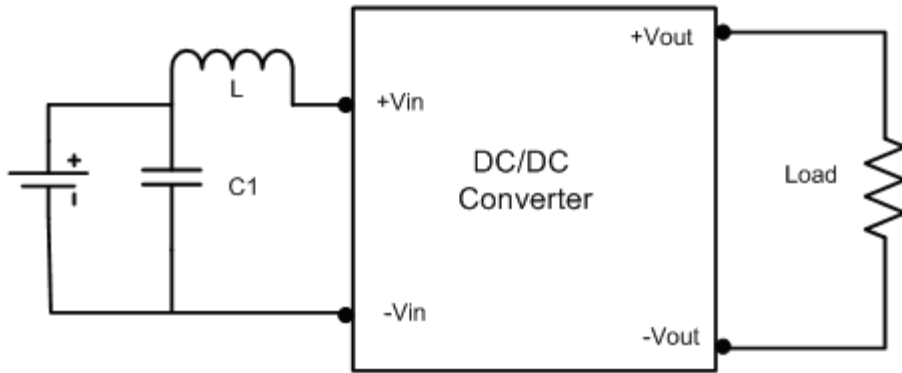


Control ON/OFF pin connection example:



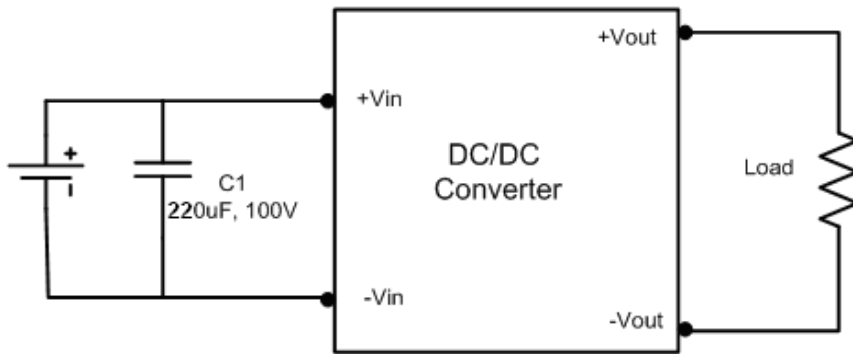
The voltage could be applied through a limiting resistor and a switching diode. The converter is in a low power mode during high level phase.

Conducted Emissions:

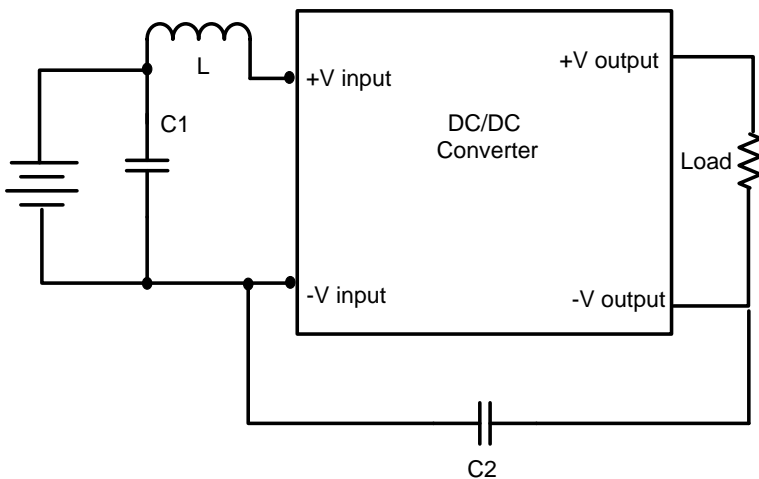


C1	L1
100μF/100V	12 μH

Surge:

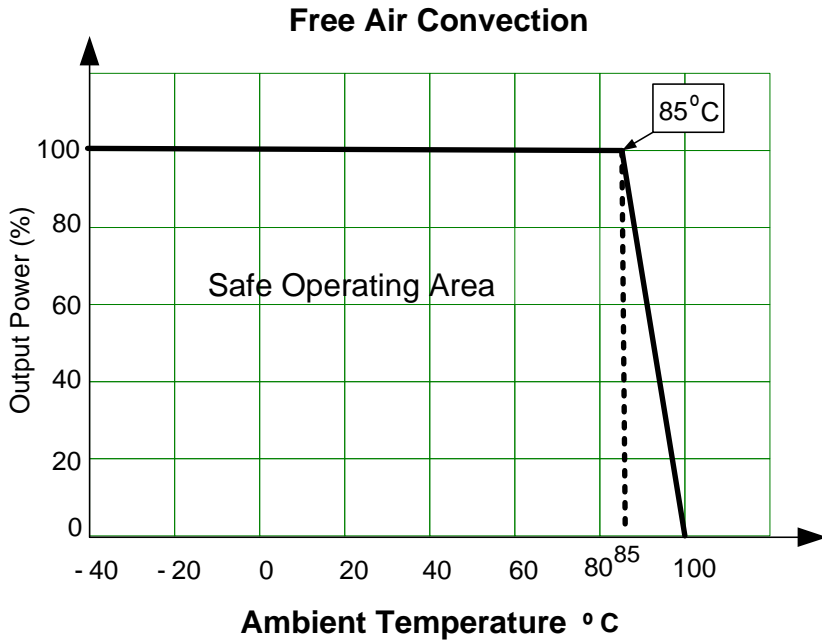


Conducted Emissions, class B compliance:

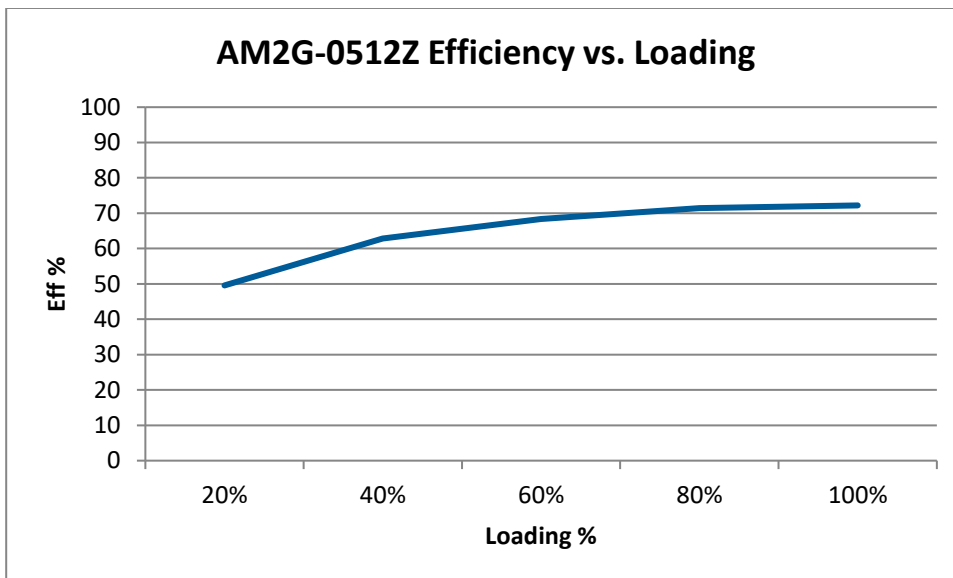


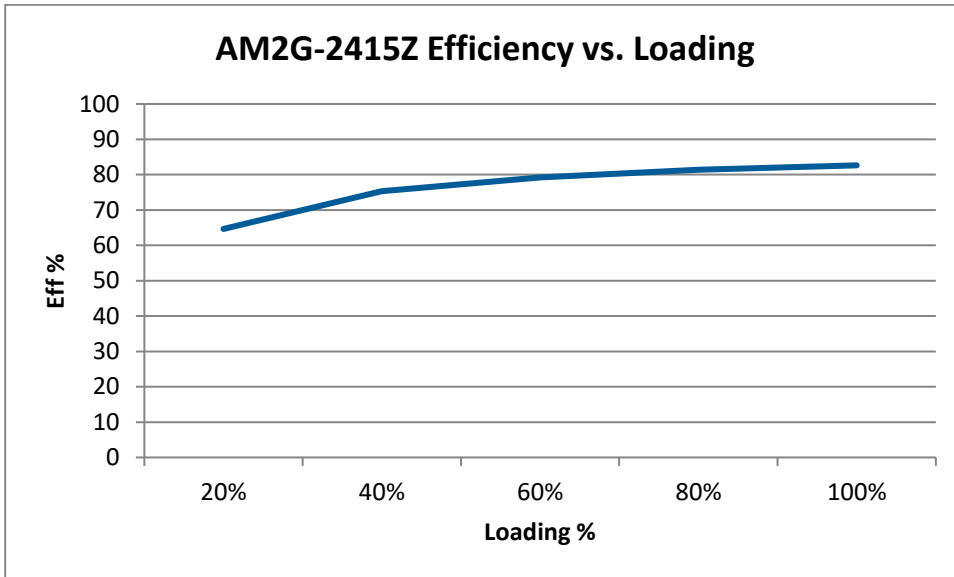
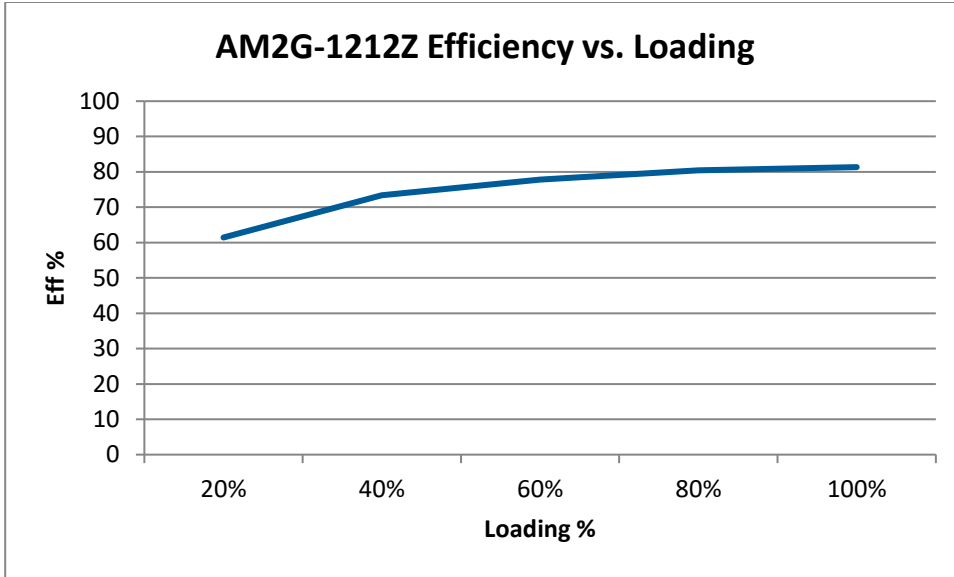
C1	C2	L
100μF/100V	470pF/3KV	12 μH

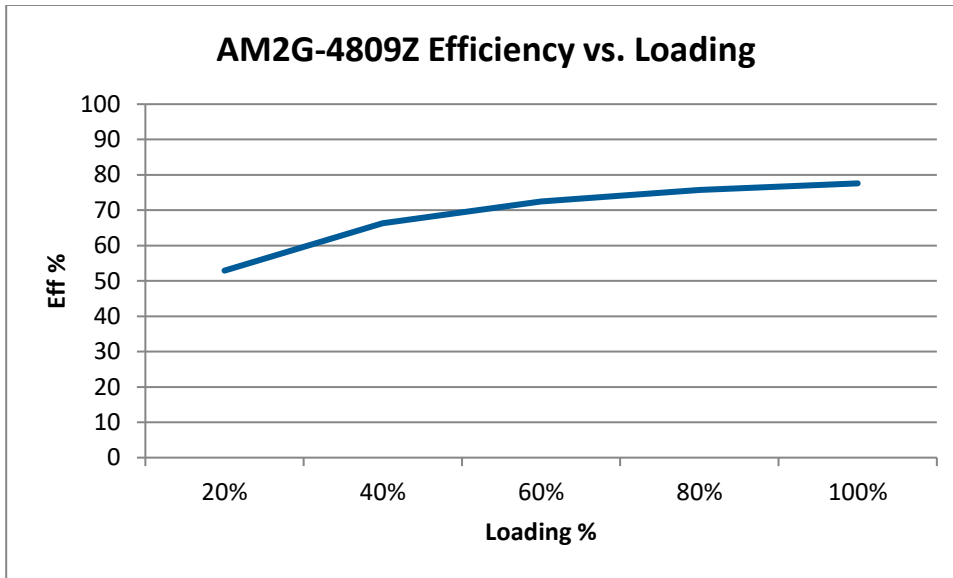
Derating



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 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 than the ones listed in this datasheet. **7.** Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.