aimtec
Your Power Partner

Series AM3G-NZ

3 Watt | DC-DC Converter

FEATURES:

- ¶ 1500 and 3000VDC I/O Isolation
- ¶ Very low no load consumption
- ¶ Remote On/Off Control
- ¶ 8 pin SIP package
- ¶ Operating temperature -40°C to 100°C
- ¶ Continuous Short circuit protection
- ¶ Wide 2:1 input range
- ¶ High efficiency up to 84%

RoHS

Models
Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Capacitive Load (ε F)	Efficiency (%)
AM3G-0503S-NZ	4.5-9	3.3	758	1500	1800	68
AM3G-0505S-NZ	4.5-9	5	500	1500	2200	73
AM3G-0509S-NZ	4.5-9	9	278	1500	1000	74
AM3G-0512S-NZ	4.5-9	12	208	1500	680	77
AM3G-0515S-NZ	4.5-9	15	167	1500	470	74
AM3G-0524S-NZ	4.5-9	24	125	1500	330	76
AM3G-1203S-NZ	9-18	3.3	758	1500	2700	75
AM3G-1205S-NZ	9-18	5	600	1500	2200	76
AM3G-1209S-NZ	9-18	9	333	1500	1000	79
AM3G-1212S-NZ	9-18	12	250	1500	680	82
AM3G-1215S-NZ	9-18	15	200	1500	470	83
AM3G-1224S-NZ	9-18	24	125	1500	330	81
AM3G-2403S-NZ	18-36	3.3	758	1500	2700	74
AM3G-2405S-NZ	18-36	5	600	1500	2200	81
AM3G-2409S-NZ	18-36	9	333	1500	1000	83
AM3G-2412S-NZ	18-36	12	250	1500	680	83
AM3G-2415S-NZ	18-36	15	200	1500	470	83
AM3G-2424S-NZ	18-36	24	125	1500	330	83
AM3G-4803S-NZ	36-75	3.3	758	1500	2700	75
AM3G-4805S-NZ	36-75	5	600	1500	2200	76
AM3G-4812S-NZ	36-75	12	250	1500	680	80
AM3G-4815S-NZ	36-75	15	200	1500	470	84
AM3G-4824S-NZ	36-75	24	125	1500	330	82
AM3G-0505SH30-NZ	4.5-9	5	500	3000	2200	73
AM3G-0509SH30-NZ	4.5-9	9	278	3000	1000	74
AM3G-0512SH30-NZ	4.5-9	12	208	3000	680	77
AM3G-0515SH30-NZ	4.5-9	15	167	3000	470	74
AM3G-1203SH30-NZ	9-18	3.3	758	3000	2700	75
AM3G-1205SH30-NZ	9-18	5	600	3000	2200	76
AM3G-1209SH30-NZ	9-18	9	333	3000	1000	79
AM3G-1212SH30-NZ	9-18	12	250	3000	680	82
AM3G-1215SH30-NZ	9-18	15	200	3000	470	83
AM3G-1224SH30-NZ	9-18	24	125	3000	330	81
AM3G-2403SH30-NZ	18-36	3.3	758	3000	2700	74
AM3G-2405SH30-NZ	18-36	5	600	3000	2200	81
AM3G-2409SH30-NZ	18-36	9	333	3000	1000	83
AM3G-2412SH30-NZ	18-36	12	250	3000	680	83
AM3G-2415SH30-NZ	18-36	15	200	3000	470	83
AM3G-2424SH30-NZ	18-36	24	125	3000	330	83
AM3G-4803SH30-NZ	36-75	3.3	758	3000	2700	75
AM3G-4805SH30-NZ	36-75	5	600	3000	2000	76
AM3G-4812SH30-NZ	36-75	12	250	3000	680	80
AM3G-4815SH30-NZ	36-75	15	200	3000	470	84

Models

Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Capacitive Load (ε F)	Efficiency (%)
AM3G-0505D-NZ	4.5-9	±5	±250	1500	±1000	74
AM3G-0512D-NZ	4.5-9	±12	±104	1500	±470	77
AM3G-0515D-NZ	4.5-9	±15	±83	1500	±330	77
AM3G-1205D-NZ	9-18	±5	±300	1500	±1000	78
AM3G-1209D-NZ	9-18	±9	±167	1500	±680	79
AM3G-1212D-NZ	9-18	±12	±125	1500	±470	80
AM3G-1215D-NZ	9-18	±15	±100	1500	±330	80
AM3G-2405D-NZ	18-36	±5	±300	1500	±1000	78
AM3G-2409D-NZ	18-36	±9	±167	1500	±680	81
AM3G-2412D-NZ	18-36	±12	±125	1500	±470	83
AM3G-2415D-NZ	18-36	±15	±100	1500	±330	83
AM3G-4805D-NZ	36-75	±5	±300	1500	±680	80
AM3G-4812D-NZ	36-75	±12	±125	1500	±470	82
AM3G-4815D-NZ	36-75	±15	±100	1500	±330	82
AM3G-0505DH30-NZ	4.5-9	±5	±250	3000	±1000	74
AM3G-0512DH30-NZ	4.5-9	±12	±104	3000	±470	77
AM3G-0515DH30-NZ	4.5-9	±15	±83	3000	±330	77
AM3G-1205DH30-NZ	9-18	±5	±300	3000	±1000	78
AM3G-1212DH30-NZ	9-18	±12	±125	3000	±470	79
AM3G-1215DH30-NZ	9-18	±15	±100	3000	±330	80
AM3G-2405DH30-NZ	18-36	±5	±300	3000	±1000	79
AM3G-2409DH30-NZ	18-36	±9	±167	3000	±680	81
AM3G-2412DH30-NZ	18-36	±12	±125	3000	±470	83
AM3G-2415DH30-NZ	18-36	±15	±100	3000	±330	83
AM3G-4805DH30-NZ	36-75	±5	±300	3000	±1000	79
AM3G-4812DH30-NZ	36-75	±12	±125	3000	±470	82
AM3G-4815DH30-NZ	36-75	±15	±100	3000	±330	82

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	5 12 24 48	4.5-9 9-18 18-36 36-75		VDC
Filter		Capacitor		
Maximum Rating	5 Vin 12 Vin 24 Vin 48 Vin	12 25 50 100		VDC
Peak Input Voltage time			1	sec
No load input current	5 Vin 12 Vin 24 Vin 48 Vin	40 20 7 7		mA
Input Reflected Ripple Current	5 Vin 12 Vin 24 Vin 48 Vin	30 30 110 45		mA
On/Off Control*	ON ï open or Isolated; OFF ï high (current 5-10mA)			

*Note: Exceeding 20mA of control current will permanently damage the converter.

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60sec, <1mA		1500, 3000	VDC
Resistance		> 1000		MOhm

Capacitance	100kHz, 1V	50		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	5 to 100% load	±2		%
No Load Voltage accuracy		±5		
Voltage balance	Dual Output balanced load	±1		%
Short Circuit Protection		Continuous		
Short Circuit Restart		Auto-recovery		
Line voltage regulation	LL~HL	±0.5		%
Load voltage regulation	load 5~100%	±0.6		%
Temperature coefficient		±0.02		%/ºC
Transient Recovery Time	25% load step	2		msec
Transient Response Deviation	25% load step	±5		%
Ripple	At 20MHz Bandwidth	50		mV p-p
Noise	At 20MHz Bandwidth	80		mV p-p

General Specifications

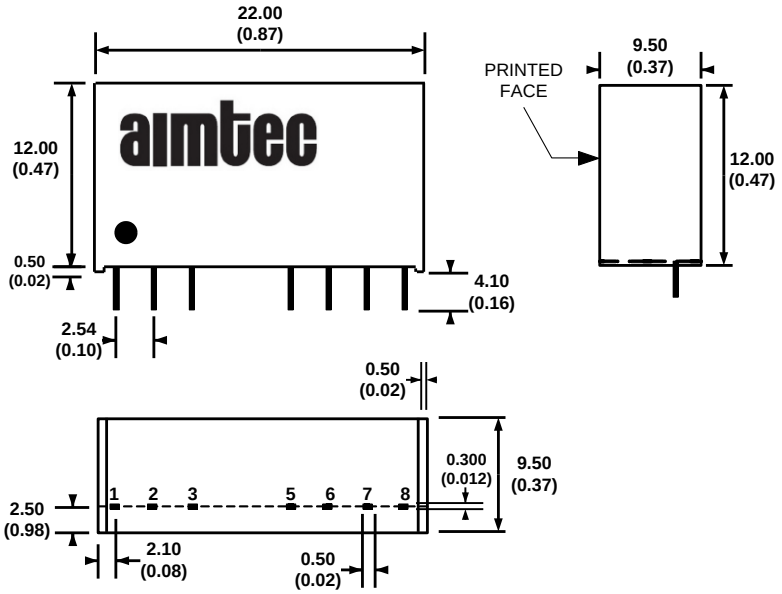
Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	250		KHz
Operating temperature	With derating above 85ºC	-40 to +100		ºC
Storage temperature		-55 to +125		ºC
Case Temperature		105		ºC
Lead Temperature	1.5mm from case for 10 Seconds	300		ºC
Cooling		Free air convection		
Humidity			95	%
Case material	Plastic (UL94V-0 rated)			
Weight		4.9		g
Dimensions (L x Wx H)	0.87 x 0.37 x 0.47 inch, 22 x 9.5 x 12 mm			
MTBF	>1 000 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25ºC)			

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.

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	CS	- V Output

Dimensions



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