



**FEATURES:**

- RoHS compliant
- 24 Pin DIP Package
- Low ripple and noise
- High efficiency up to 74%
- Operating temperature -40°C to + 85°C
- Input / Output Isolation 1000, 3000 and 5200VDC
- Pin compatible with multiple manufacturers
- Continuous short circuit protection



**Models**  
**Single output**

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max Capacitive Load	Efficiency (%)
AM3N-0503SZ	4.5-5.5	3.3	600	1000	470	55
AM3N-0505SZ	4.5-5.5	5	600	1000	470	65
AM3N-0507SZ	4.5-5.5	7.2	417	1000	470	62
AM3N-0509SZ	4.5-5.5	9	333	1000	470	70
AM3N-0512SZ	4.5-5.5	12	250	1000	470	70
AM3N-0515SZ	4.5-5.5	15	200	1000	470	70
AM3N-0518SZ	4.5-5.5	18	167	1000	470	65
AM3N-0524SZ	4.5-5.5	24	125	1000	470	67
AM3N-1203SZ	10.8-13.2	3.3	600	1000	470	60
AM3N-1205SZ	10.8-13.2	5	600	1000	470	66
AM3N-1207SZ	10.8-13.2	7.2	417	1000	470	69
AM3N-1209SZ	10.8-13.2	9	333	1000	470	68
AM3N-1212SZ	10.8-13.2	12	250	1000	470	74
AM3N-1215SZ	10.8-13.2	15	200	1000	470	72
AM3N-1218SZ	10.8-13.2	18	167	1000	470	70
AM3N-1224SZ	10.8-13.2	24	125	1000	470	70
AM3N-2403SZ	21.6-26.4	3.3	600	1000	470	52
AM3N-2405SZ	21.6-26.4	5	600	1000	470	66
AM3N-2407SZ	21.6-26.4	7.2	417	1000	470	61
AM3N-2409SZ	21.6-26.4	9	333	1000	470	68
AM3N-2412SZ	21.6-26.4	12	250	1000	470	70
AM3N-2415SZ	21.6-26.4	15	200	1000	470	70
AM3N-2418SZ	21.6-26.4	18	167	1000	470	70
AM3N-2424SZ	21.6-26.4	24	125	1000	470	74
AM3N-0503SH30Z	4.5-5.5	3.3	600	3000	470	55
AM3N-0505SH30Z	4.5-5.5	5	600	3000	470	65
AM3N-0507SH30Z	4.5-5.5	7.2	417	3000	470	62
AM3N-0509SH30Z	4.5-5.5	9	333	3000	470	70
AM3N-0512SH30Z	4.5-5.5	12	250	3000	470	70
AM3N-0515SH30Z	4.5-5.5	15	200	3000	470	70
AM3N-0518SH30Z	4.5-5.5	18	167	3000	470	65
AM3N-0524SH30Z	4.5-5.5	24	125	3000	470	67
AM3N-1203SH30Z	10.8-13.2	3.3	600	3000	470	60
AM3N-1205SH30Z	10.8-13.2	5	600	3000	470	66
AM3N-1207SH30Z	10.8-13.2	7.2	417	3000	470	69
AM3N-1209SH30Z	10.8-13.2	9	333	3000	470	68
AM3N-1212SH30Z	10.8-13.2	12	250	3000	470	74
AM3N-1215SH30Z	10.8-13.2	15	200	3000	470	72
AM3N-1218SH30Z	10.8-13.2	18	167	3000	470	70
AM3N-1224SH30Z	10.8-13.2	24	125	3000	470	70
AM3N-2403SH30Z	21.6-26.4	3.3	600	3000	470	52
AM3N-2405SH30Z	21.6-26.4	5	600	3000	470	66
AM3N-2407SH30Z	21.6-26.4	7.2	417	3000	470	61
AM3N-2409SH30Z	21.6-26.4	9	333	3000	470	68
AM3N-2412SH30Z	21.6-26.4	12	250	3000	470	70
AM3N-2415SH30Z	21.6-26.4	15	200	3000	470	70
AM3N-2418SH30Z	21.6-26.4	18	167	3000	470	70
AM3N-2424SH30Z	21.6-26.4	24	125	3000	470	74

**Models**  
Single output (Continue)

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max Capacitive Load (uF)	Efficiency (%)
AM3N-0503SH52Z	4.5-5.5	3.3	600	5200	470	55
AM3N-0505SH52Z	4.5-5.5	5	600	5200	470	65
AM3N-0507SH52Z	4.5-5.5	7.2	417	5200	470	62
AM3N-0509SH52Z	4.5-5.5	9	333	5200	470	70
AM3N-0512SH52Z	4.5-5.5	12	250	5200	470	70
AM3N-0515SH52Z	4.5-5.5	15	200	5200	470	70
AM3N-0518SH52Z	4.5-5.5	18	167	5200	470	65
AM3N-0524SH52Z	4.5-5.5	24	125	5200	470	67
AM3N-1203SH52Z	10.8-13.2	3.3	600	5200	470	60
AM3N-1205SH52Z	10.8-13.2	5	600	5200	470	66
AM3N-1207SH52Z	10.8-13.2	7.2	417	5200	470	69
AM3N-1209SH52Z	10.8-13.2	9	333	5200	470	68
AM3N-1212SH52Z	10.8-13.2	12	250	5200	470	74
AM3N-1215SH52Z	10.8-13.2	15	200	5200	470	72
AM3N-1218SH52Z	10.8-13.2	18	167	5200	470	70
AM3N-1224SH52Z	10.8-13.2	24	125	5200	470	70
AM3N-2403SH52Z	21.6-26.4	3.3	700	5200	470	52
AM3N-2405SH52Z	21.6-26.4	5	600	5200	470	66
AM3N-2407SH52Z	21.6-26.4	7.2	417	5200	470	61
AM3N-2409SH52Z	21.6-26.4	9	333	5200	470	68
AM3N-2412SH52Z	21.6-26.4	12	250	5200	470	70
AM3N-2415SH52Z	21.6-26.4	15	200	5200	470	70
AM3N-2418SH52Z	21.6-26.4	18	167	5200	470	70
AM3N-2424SH52Z	21.6-26.4	24	125	5200	470	74

**Input Specifications**

Parameters	Nominal	Typical	Maximum	Units
Voltage range	5	4.5-5.5		VDC
	12	10.8-13.2		
	24	21.6-26.4		
Filter	$\pi$ (Pi) Network			
Turn on Transient process time			100	ms
Start up time		300		ms
Absolute Maximum Rating	5 Vin	0-7		VDC
	12 Vin	0-15		
	24 Vin	0-28		
Peak Input Voltage time		100		ms

**Isolation Specifications**

Parameters	Conditions	Typical	Rated	Units
Tested voltage	3 sec		1000, 3000 and 5200	VDC
Resistance		> 1000		MOhm
Capacitance		60		pF

**Output Specifications**

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		$\pm 2$		%
Short Circuit protection	Continuous			
Short circuit restart	Automatic			

## Output Specifications (continued)

Parameters	Conditions	Typical	Maximum	Units
Line voltage regulation (Single)		±0.5		%
Load voltage regulation (Single)	0 to 100% load	±0.5		%
Load voltage regulation (Single) 3.3V output model	0 to 100% load	±1.5		%
Temperature coefficient		±0.02		%/°C
Ripple & Noise	At 20MHz Bandwidth	75		mV p-p
Rising time		150		ms

## General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	40		KHz
Operating temperature	Full Load without Derating	-40 to +85		°C
Storage temperature		-40 to +125		°C
Maximum Case temperature			95	°C
Cooling	Free air convection			
Humidity	Non condensing		90	%
Case material	Nickel-coated copper, at 5200VDC plastic			
Weight		14.5		g
Dimensions (L x W xH)	Tolerance ±0.5 mm or ±0.02 inches	1.25 x 0.80 x 0.40 inches 31.75 x 20.32 x 10.16 mm		
MTBF	>954 000 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

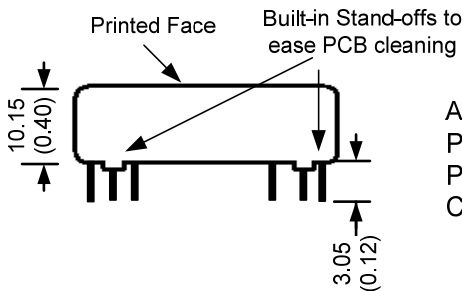
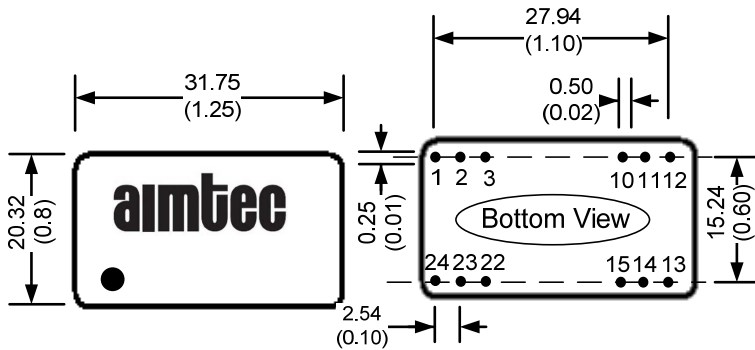
## Safety Specifications

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

## Pin Out Specifications

Pin	1000VDC	3000 and 5200VDC
	Single	Single
1	+V Input	+V Input
2	N.C.	+V Input
3	N.C.	No pin
10	-V Output	No pin
11	+V Output	No pin
12	-V Input	-V Output
13	-V Input	+V Output
14	+V Output	No pin
15	-V Output	No pin
22	N.C.	No pin
23	N.C.	-V Input
24	+V Input	-V Input

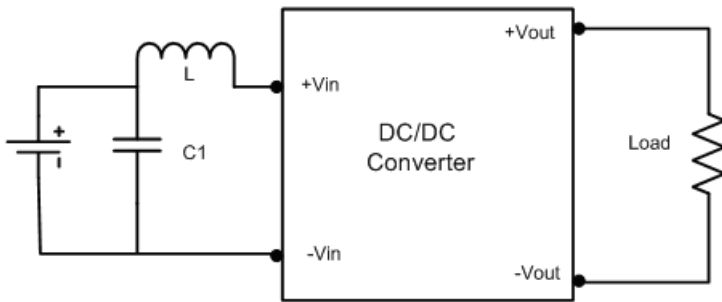
### Dimensions



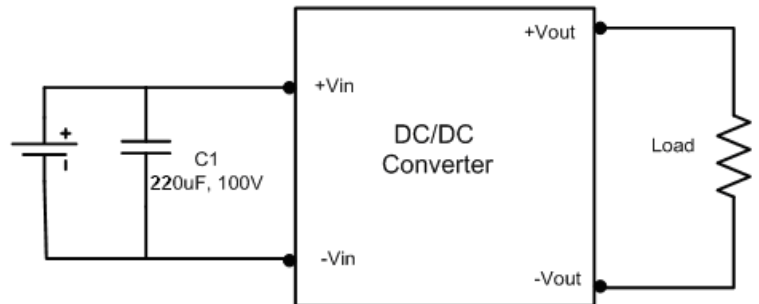
All dimensions are typical: millimeters (inches)  
 Pin Diameter:  $0.50 \pm 0.05$  ( $0.02 \pm 0.002$ )  
 Pin Pitch Tolerance:  $\pm 0.35$  ( $\pm 0.014$ )  
 Case Tolerance:  $\pm 0.5$  ( $\pm 0.02$ )

### Test Circuits

#### Conducted Emissions:



#### Surge:



C1	L1
220μF/100V	12μH

**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 than 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).