aimtec
Your Power Partner

Series AM4N-Z

4 Watt | DC-DC Converter



FEATURES:

- RoHS compliant
- ±20% Input voltage range
- Low ripple and noise
- High efficiency up to 81%
- Operating temperature -40°C to + 85°C
- 5KVAC highest reinforced input/ output isolation
- Pin compatible with multiple manufacturers
- Continuous short circuit protection

Models

Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VAC)	Max Capacitive Load (uF)	Efficiency (%)
AM4N-0503SH50Z	4-6	3.3	700	5000	470	74
AM4N-0505SH50Z	4-6	5	700	5000	470	78
AM4N-0512SH50Z	4-6	12	291	5000	220	80
AM4N-0515SH50Z	4-6	15	233	5000	220	79
AM4N-1203SH50Z	9.6-14.4	3.3	700	5000	470	76
AM4N-1205SH50Z	9.6-14.4	5	700	5000	470	80
AM4N-1212SH50Z	9.6-14.4	12	291	5000	220	81
AM4N-1215SH50Z	9.6-14.4	15	233	5000	220	81

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	5 12	4-6 9.6-14.4		VDC
Filter		Capacitors		
Start up time		75		ms
Absolute Maximum Rating	5 Vin 12 Vin	0-7 0-15		VDC
No Load Input Current		80	115	mA
Input reflected current(pk-pk)		35		mA

Isolation Specifications

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	3 sec	5000		VAC
Resistance		1000		MOhm
Capacitance		50		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2		%
Short Circuit protection		Continuous		
Short circuit restart		Autorecovery		
Short Circuit consumption				W
Line voltage regulation		±0.2		% of Vin
Load voltage regulation	From 10% to 100% Load	±0.5		%
Temperature coefficient		±0.02		%/°C
Ripple & Noise	20MHz Bandwidth	85		mV p-p
Minimum Load Current		10		% of Max

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	570		KHz
Operating temperature	-40 to +85 (full load without derating)			°C
Storage temperature	-55 to +125			°C

Downloaded from Arrow.com.

General Specifications (continued)

Parameters	Conditions	Typical	Maximum	Units
Maximum case temperature		100		°C
Derating		None		%/ °C
Cooling	Natural Convection			
Humidity		95		% RH
Case material	Non Conductive Black Plastic (UL94V-0 rated)			
Weight	12.5			g
Dimensions (L x W x H)	1.25 x 0.80 x 0.40 inches 31.75 x 20.32 x 10.16 mm			
MTBF	> 1 000 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			
Maximum soldering temperature	1.5mm from case for 10sec		260	°C

Safety Specifications

Parameters	
Agency Approvals	CE
Standards	EN 55022 Class A
	EN 55024
	IEC 61000-4-2
	IEC 61000-4-3
	IEC 61000-4-4
	IEC 61000-4-5
	IEC 61000-4-6
	IEC 61000-4-8
	NOTE: also designed to meet IEC 60601-1

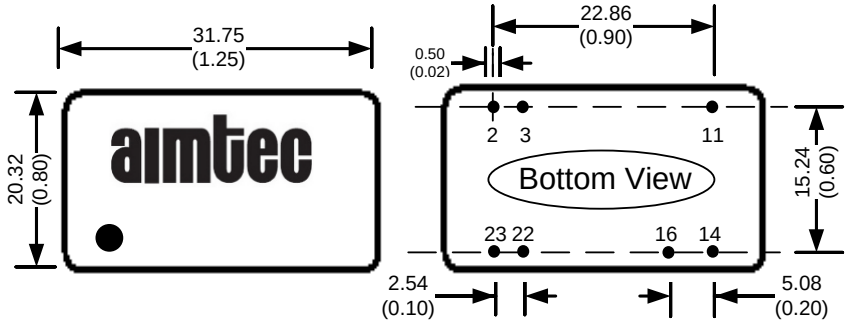
Pin Out Specifications

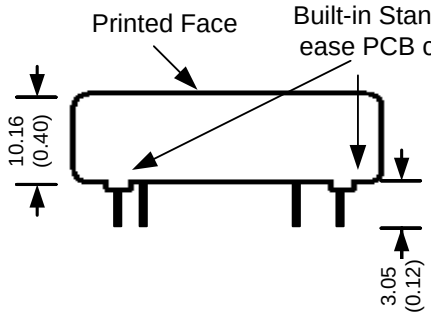
Pin	Single
2	-V Input
3	-V Input
11	N.C.
14	+V Output
16	-V Output
22	V+ Input
23	V+ Input

N.C.: No connection

Downloaded from Arrow.com.

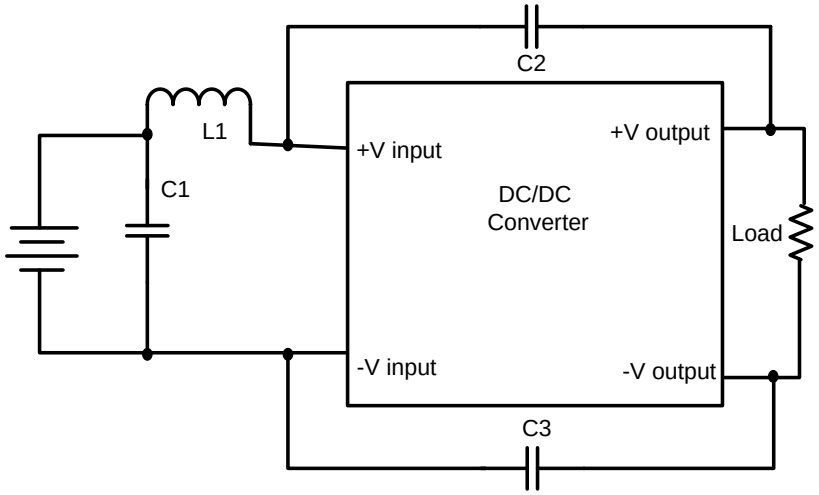
Dimensions





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

EMI Solution

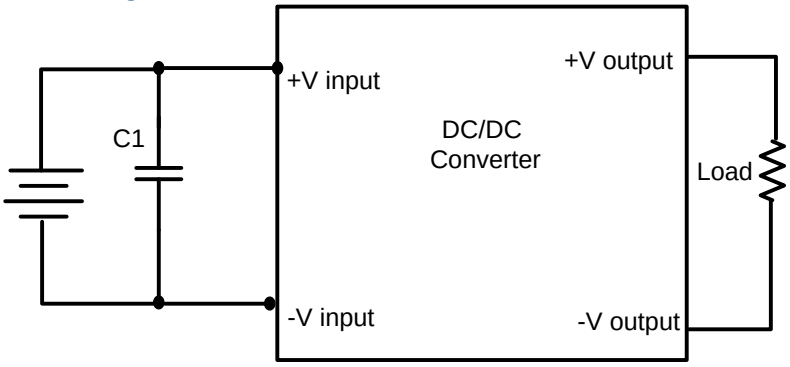


C1	L1	C2 & C3
47uF, 25V	12uH	150PF/250VAC

C2 & C3 : Y5P Safety Standard Recognized Ceramic Capacitors
foot distance 10mm

Downloaded from Arrow.com.

EFT/Surge Solution



C1
470uF, 25V

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

Downloaded from Arrow.com.