

## Series AM8T-Z

### 8 Watt | DC-DC Converter



#### FEATURES:

- RoHS compliant
- 24 Pin DIP Package
- Wide 2:1 input range
- Efficiency up to 85%
- Operating temperature -40°C to + 85°C
- Continuous Short Circuit Protection
- Low ripple and noise
- Input/output Isolation voltage 1500VDC

#### Models Single output



Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Capacitive load (μF)	Efficiency (%)
AM8T-1203SZ	9-18	3.3	2000	3300	80
AM8T-1205SZ	9-18	5	1500	2200	82
AM8T-1212SZ	9-18	12	665	470	85
AM8T-1215SZ	9-18	15	535	220	83
AM8T-2403SZ	18-36	3.3	2000	3300	80
AM8T-2405SZ	18-36	5	1500	2200	82
AM8T-2412SZ	18-36	12	665	470	85
AM8T-2415SZ	18-36	15	535	220	84
AM8T-4803SZ	36-72	3.3	2000	3300	80
AM8T-4805SZ	36-72	5	1500	2200	82
AM8T-4812SZ	36-72	12	665	470	84
AM8T-4815SZ	36-72	15	535	220	84

#### Models Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Capacitive load (μF)	Efficiency (%)
AM8T-1205DZ	9-18	±5	±800	±1000	82
AM8T-1212DZ	9-18	±12	±335	±220	84
AM8T-1215DZ	9-18	±15	±265	±100	84
AM8T-2405DZ	18-36	±5	±800	±1000	82
AM8T-2412DZ	18-36	±12	±335	±220	83
AM8T-2415DZ	18-36	±15	±265	±100	85
AM8T-4805DZ	36-72	±5	±800	±1000	82
AM8T-4812DZ	36-72	±12	±335	±220	85
AM8T-4815DZ	36-72	±15	±265	±100	85

#### Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	12	9-18		VDC
	24	18-36		
	48	36-72		
Filter	π (Pi) Network			
Turn on Transient process time			350	ms
Start up time		20		ms
Absolute Maximum Rating	12 Vin	-0.7-24		VDC
	24 Vin	-0.7-40		
	48 Vin	-0.7-100		
Peak Input Voltage time		100		ms

### Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	3 sec		1500	VDC
Case/input & Output		1000		VDC
Resistance		> 1000		MOhm
Capacitance		1000		pF

### Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±1		%
Voltage balance (Dual output model)	Balanced Load	±1		%
Short Circuit protection		Continuous		
Short Circuit restart		Auto recovery		
Current Limiting		140 % of I <sub>out</sub> max		
Line voltage regulation	HL-LL	±0.5		%
Load voltage regulation	10% to 100% load	±0.5		%
Temperature coefficient		±0.02		%/°C
Rising time		10		ms
Ripple and Noise		75		mVp-p

### General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	330		KHz
Operating temperature	With Derating above 55°C	-40 to +85		°C
Storage temperature		-40 to +125		°C
Max Case temperature			+100	°C
Cooling		Free air convection		
Humidity			95	%
Case material		Nickel coated cooper		
Weight		17		g
Dimensions (L x H x W)	Tolerance ±0.5 mm or ±0.02 inches	1.25 x 0.80 x 0.40 inches	31.80 x 20.30 x 10.20 mm	
MTBF		>1 121 000 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.

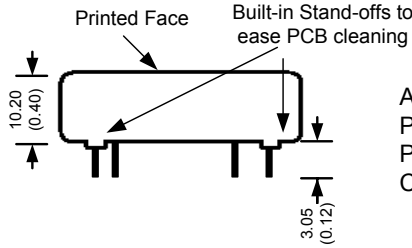
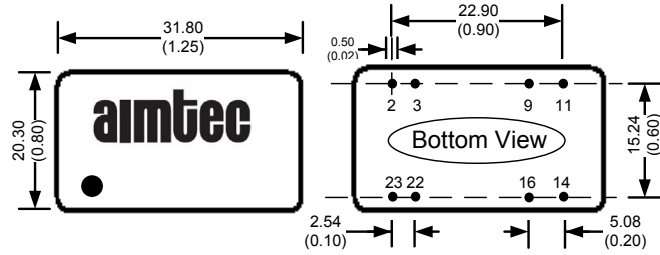
### Safety Specifications

Parameters	
Agency Approval	CE
Standards	IEC 60950-1:2005 (2 <sup>nd</sup> Edition); EN 60950-1:2006
	EN55022 Class A, EN55024
	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

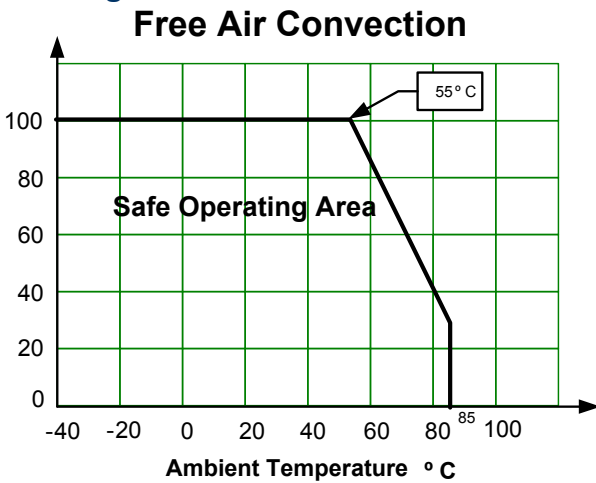
Pin	Single	Dual
2	-V Input	-V Input
3	-V Input	-V Input
9	No pin	Common
11	N.C.	-V Output
14	+V Output	+ V Output
16	-V Output	Common
22	+V Input	+V Input
23	+V Input	+V Input

### Dimensions (Bottom view)



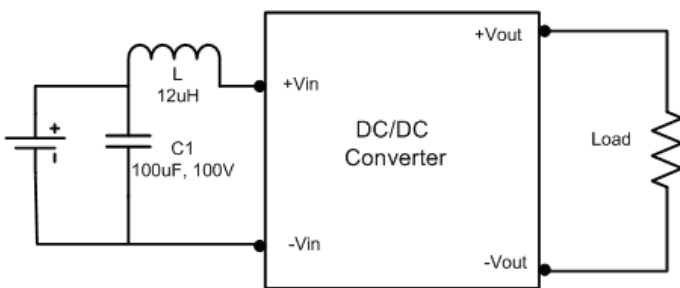
All dimensions are typical: millimeters (inches)  
Pin Diameter:  $0.50 \pm 0.05$  ( $0.02 \pm 0.002$ )  
Pin Pitch Tolerance:  $\pm 0.35$  ( $\pm 0.014$ )  
Case Tolerance:  $\pm 0.5$  ( $\pm 0.02$ )

### Derating

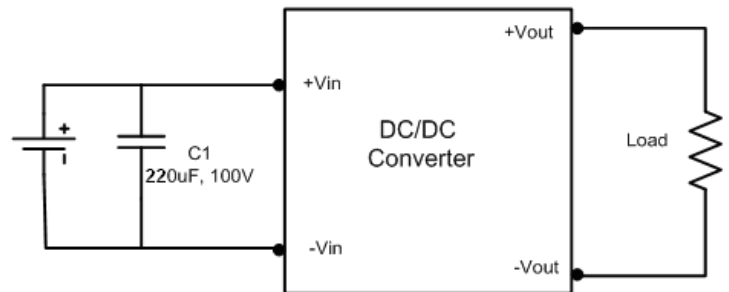


### Test Circuits

#### Conducted Emissions:



#### Surge:



**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).