

Series AM8T-Z

8 Watt | DC-DC Converter



FEATURES:

- Wide 2:1 input range
- 24 Pin DIP Package
- Over current protection
- Efficiency up to 86%
- 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)	Input current NL FL (mA)	Output Voltage (V)	Output Current max (mA)	Capacitive load (μF)	Efficiency (%)
AM8T-1203SZ	9-18	20 687	3.3	2000	3300	80
AM8T-1205SZ	9-18	20 762	5	1500	2200	82
AM8T-1207SZ	9-18	20 803	7.2	1111	1000	83
AM8T-1209SZ	9-18	20 794	9	888	470	84
AM8T-1212SZ	9-18	20 784	12	665	470	85
AM8T-1215SZ	9-18	20 803	15	535	220	83
AM8T-2403SZ	18-36	15 344	3.3	2000	3300	80
AM8T-2405SZ	18-36	15 381	5	1500	2200	82
AM8T-2407SZ	18-36	15 396	7.2	1111	1000	84
AM8T-2409SZ	18-36	15 387	9	888	470	86
AM8T-2412SZ	18-36	15 392	12	665	470	85
AM8T-2415SZ	18-36	15 397	15	535	220	84
AM8T-4803SZ	36-72	15 172	3.3	2000	3300	80
AM8T-4805SZ	36-72	15 191	5	1500	2200	82
AM8T-4807SZ	36-72	15 198	7.2	1111	1000	84
AM8T-4809SZ	36-72	15 198	9	888	470	84
AM8T-4812SZ	36-72	15 198	12	665	470	84
AM8T-4815SZ	36-72	15 198	15	535	220	84

Models Dual output

Model	Input Voltage (V)	Input current NL FL (mA)	Output Voltage (V)	Output Current max (mA)	Capacitive load (μF)	Efficiency (%)
AM8T-1205DZ	9-18	20 813	±5	±800	±1000	82
AM8T-1207DZ	9-18	20 803	±7.2	±555	±470	83
AM8T-1209DZ	9-18	20 794	±9	±444	±330	84
AM8T-1212DZ	9-18	20 794	±12	±335	±220	84
AM8T-1215DZ	9-18	20 794	±15	±265	±100	84
AM8T-2405DZ	18-36	15 407	±5	±800	±1000	82
AM8T-2407DZ	18-36	15 396	±7.2	±555	±470	84
AM8T-2409DZ	18-36	15 392	±9	±444	±330	85
AM8T-2412DZ	18-36	15 402	±12	±335	±220	83
AM8T-2415DZ	18-36	15 392	±15	±265	±100	85
AM8T-4805DZ	36-72	15 203	±5	±800	±1000	82
AM8T-4807DZ	36-72	15 198	±7.2	±555	±470	84
AM8T-4809DZ	36-72	15 198	±9	±444	±330	84
AM8T-4812DZ	36-72	15 196	±12	±335	±220	85
AM8T-4815DZ	36-72	15 196	±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			
Absolute Maximum Rating	12 Vin	-0.7-25		VDC
	24 Vin	-0.7-50		
	48 Vin	-0.7-100		
Peak Input Voltage time		100		ms
Input Reflected ripple current *		35		mA p-p

* The input reflected ripple current should be measured with connected 12 μ H inductor.

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		1500	VDC
Case/input & Output	60 sec	1000		VDC
Resistance		> 1000		MOhm
Capacitance		1000		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		± 1		%
Cross Regulation (Dual output models)	1 load: 25 to 100%, other: 100% load	± 5		%
Short Circuit protection	Continuous, hiccup			
Short Circuit restart	Auto recovery			
Over Current Protection	150 % of I _{out} max			
Line voltage regulation	HL-LL	± 0.5		%
Load voltage regulation	0% to 100% load	± 0.5	± 1.5	%
Temperature coefficient		± 0.02		%/ $^{\circ}$ C
Ripple and Noise *		75		mVp-p

* Measured with 1 μ F CC.

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	330		KHz
Operating temperature	With Derating above 60 $^{\circ}$ C	-40 to +85		$^{\circ}$ C
Storage temperature		-40 to +125		$^{\circ}$ C
Max Case temperature			+100	$^{\circ}$ 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	>910 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25 $^{\circ}$ C)			

NOTE: All specifications in this datasheet are measured at an ambient temperature of 25 $^{\circ}$ C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

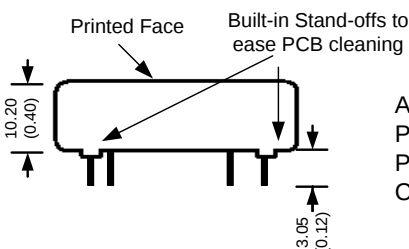
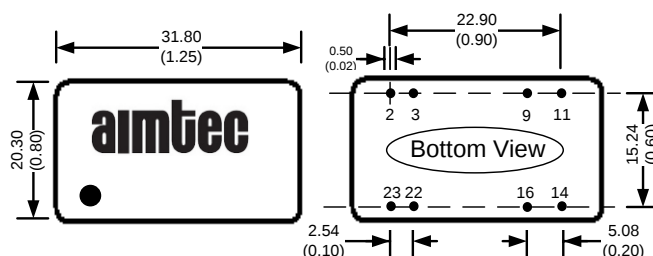
Safety Specifications

Parameters	
Agency Approval	UL, CE
Standards	EN55032 Class A, with recommended circuit
	IEC61000-4-2, Perf. Criteria A
	IEC61000-4-3, Perf. Criteria A
	IEC61000-4-4, Perf. Criteria A (external 220uF/100V cap required)
	IEC61000-4-5, Perf. Criteria A (external 220uF/100V cap required)
	IEC61000-4-6, Perf. Criteria A
	IEC61000-4-8, Perf. Criteria A
IEC/EN/UL 60950-1:2001 & IEC/EN/UL 62368-1	

Pin Out Specifications

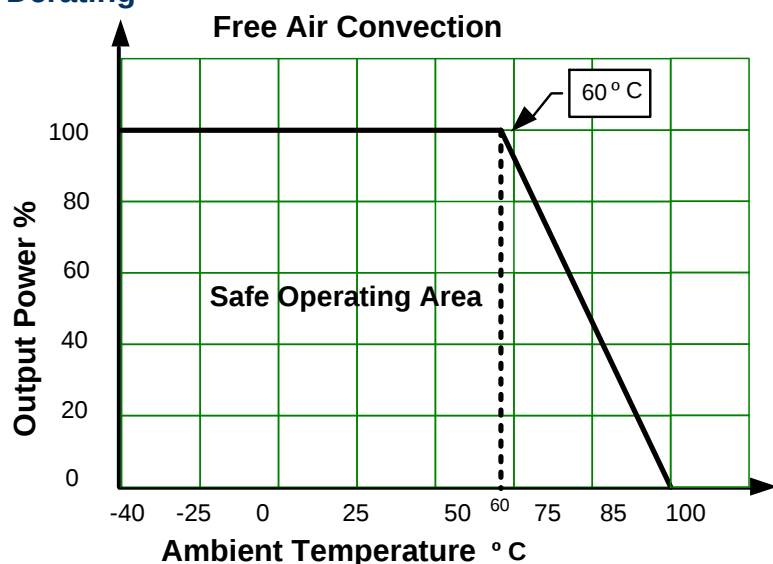
Pin	Single	Dual
2	-V Input	-V Input
3	-V Input	-V Input
9	No pin	Common
11	N.C.	-V Output
14	+V Output	+ V Output
16	-V Output	Common
22	+V Input	+V Input
23	+V Input	+V Input

Dimensions (Bottom view)



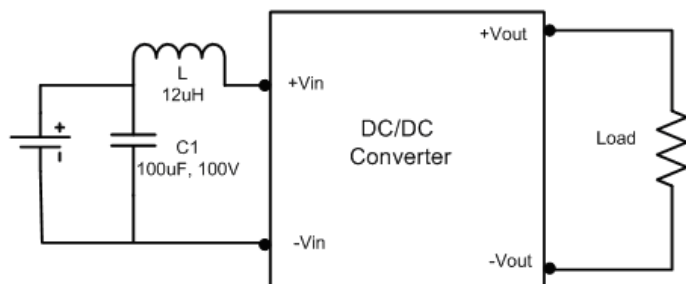
All dimensions are typical: millimeters (inches)
Pin Diameter: 0.50 ± 0.05 (0.02 ± 0.002)
Pin Pitch Tolerance: ± 0.35 (± 0.014)
Case Tolerance: ± 0.5 (± 0.02)

Derating

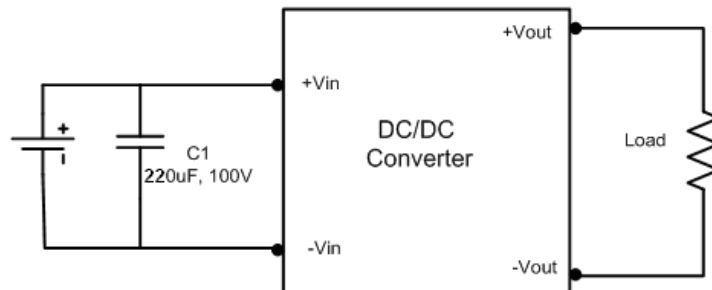


Test Circuits

Conducted Emissions:



Surge:



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