Series AM6T-VZ

6 Watt | DC-DC Converter

FEATURES:

- Wide 2:1 input range
- 24 Pin DIP Package
- Metal package
- High efficiency up to 81%
- Operating temperature -40ºC to + 85ºC
- Input / Output isolation 1500 & 3500 VDC
- Pin compatible with multiple manufacturers
- Continuous short circuit protection

RoHS

Models
Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Capacitive load, max (µF)	Efficiency (%)
AM6T-1205S-VZ	9-18	5	1200	2200	68
AM6T-1209S-VZ	9-18	9	666	470	72
AM6T-1212S-VZ	9-18	12	500	470	74
AM6T-1215S-VZ	9-18	15	400	470	79
AM6T-1224S-VZ	9-18	24	250	220	76
AM6T-2405S-VZ	18-36	5	1200	2200	76
AM6T-2409S-VZ	18-36	9	666	470	80
AM6T-2412S-VZ	18-36	12	500	470	80
AM6T-2415S-VZ	18-36	15	400	470	81
AM6T-2424S-VZ	18-36	24	250	220	77
AM6T-4805S-VZ	36-72	5	1200	2200	74
AM6T-4809S-VZ	36-72	9	666	470	77
AM6T-4812S-VZ	36-72	12	500	470	77
AM6T-4815S-VZ	36-72	15	400	470	79
AM6T-4824S-VZ	36-72	24	250	220	75
AM6T-1205SH35-VZ	9-18	5	1200	2200	68
AM6T-1209SH35-VZ	9-18	9	666	470	72
AM6T-1212SH35-VZ	9-18	12	500	470	74
AM6T-1215SH35-VZ	9-18	15	400	470	79
AM6T-1224SH35-VZ	9-18	24	250	220	76
AM6T-2405SH35-VZ	18-36	5	1200	2200	76
AM6T-2409SH35-VZ	18-36	9	666	470	80
AM6T-2412SH35-VZ	18-36	12	500	470	80
AM6T-2415SH35-VZ	18-36	15	400	470	81
AM6T-2424SH35-VZ	18-36	24	250	220	77
AM6T-4805SH35-VZ	36-72	5	1200	2200	74
AM6T-4809SH35-VZ	36-72	9	666	470	77
AM6T-4812SH35-VZ	36-72	12	500	470	77
AM6T-4815SH35-VZ	36-72	15	400	470	79
AM6T-4824SH35-VZ	36-72	24	250	220	75

Models
Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Capacitive load, max (µF)	Efficiency (%)
AM6T-1205D-VZ	9-18	±5	±600	±1000	78
AM6T-1209D-VZ	9-18	±9	±333	±220	78
AM6T-1212D-VZ	9-18	±12	±250	±220	78
AM6T-1215D-VZ	9-18	±15	±200	±220	80
AM6T-1224D-VZ	9-18	±24	±125	±100	78
AM6T-2405D-VZ	18-36	±5	±600	±1000	76
AM6T-2409D-VZ	18-36	±9	±333	±220	77
AM6T-2412D-VZ	18-36	±12	±250	±220	80
AM6T-2415D-VZ	18-36	±15	±200	±220	80
AM6T-2424D-VZ	18-36	±24	±125	±100	78
AM6T-4805D-VZ	36-72	±5	±600	±1000	74
AM6T-4809D-VZ	36-72	±9	±333	±220	76

Models

Dual output (continued)

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Capacitive load, max (µF)	Efficiency (%)
AM6T-4812D-VZ	36-72	±12	±250	±220	76
AM6T-4815D-VZ	36-72	±15	±200	±220	78
AM6T-4824D-VZ	36-72	±24	±125	±100	77
AM6T-1205DH35-VZ	9-18	±5	±600	±1000	78
AM6T-1209DH35-VZ	9-18	±9	±333	±220	78
AM6T-1212DH35-VZ	9-18	±12	±250	±220	78
AM6T-1215DH35-VZ	9-18	±15	±200	±220	80
AM6T-1224DH35-VZ	9-18	±24	±125	±100	78
AM6T-2405DH35-VZ	18-36	±5	±600	±1000	76
AM6T-2409DH35-VZ	18-36	±9	±333	±220	77
AM6T-2412DH35-VZ	18-36	±12	±250	±220	80
AM6T-2415DH35-VZ	18-36	±15	±200	±220	80
AM6T-2424DH35-VZ	18-36	±24	±125	±100	78
AM6T-4805DH35-VZ	36-72	±5	±600	±1000	74
AM6T-4809DH35-VZ	36-72	±9	±333	±220	76
AM6T-4812DH35-VZ	36-72	±12	±250	±220	76
AM6T-4815DH35-VZ	36-72	±15	±200	±220	78
AM6T-4824DH35-VZ	36-72	±24	±125	±100	77

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage Range	12	9-18		VDC
	24	18-36		
	48	36-72		
Filter		π (Pi) Network		
Start up time		20		Ms
Absolute Maximum Rating	12 Vin	-0.7-24		VDC
	24 Vin	-0.7-40		
	48 Vin	-0.7-80		
Peak Input Voltage time		15		Ms

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	3 sec		1500 (3500 H35 model)	VDC
Resistance		> 1000		MOhm
Capacitance		60		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±1		%
Voltage balance	Balanced Load	±1		%
Short circuit protection		Continuous		
Short circuit restart		Auto Recovery		
Line voltage regulation	HL-LL	±0.5		%
Load voltage regulation	25-100% Load	±0.5		%
Temperature coefficient		±0.02		%/°C
Ripple & Noise*	At 20MHz Bandwidth	60		mV p-p

* In order to achieve ripple and noise specification, a 100µF capacitor is required to be connected to the output of the converter

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency		100-400		KHz
Operating temperature	Full Load (see derating chart)	-40 to +85		ºC
Storage temperature		-40 to +125		ºC
Max Case temperature			100	ºC
Cooling	Free air convection			
Humidity			95	%
Case material	Nickel coated copper			
Weight		12.16		G
Dimensions(L x W x H)	Tolerance ±0.5 mm or ±0.02 inches	1.25 x 0.8 x 0.4 inches	31.75 x 20.32 x 10.16 mm	
MTBF	>2,200,000 hrs (MIL-HDBK -217F, Ground Benign, t=+25ºC)			

Safety Specifications

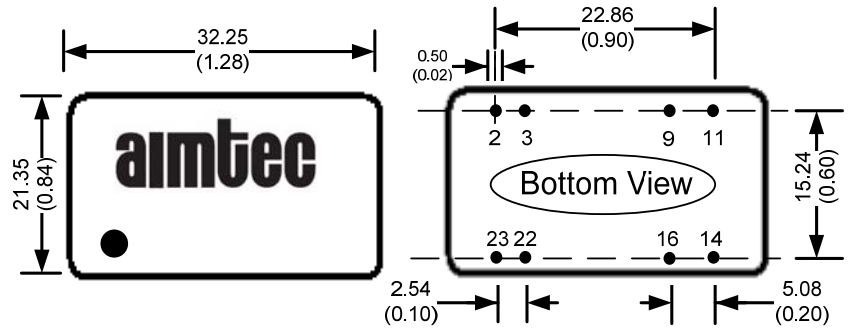
Parameters	
Standards	Designed to meet IEC 60950-1

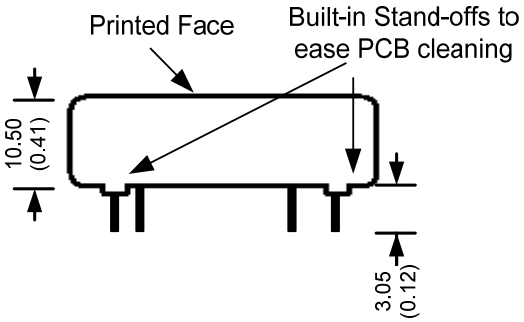
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

Pin Out Specifications

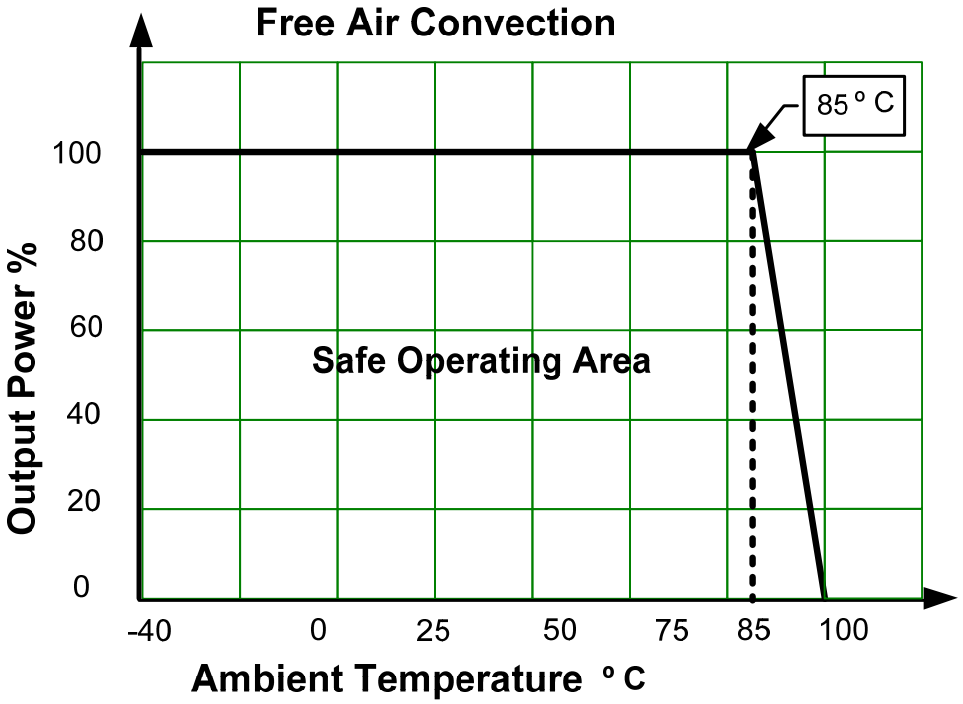
Pin	1500 and 3500VDC	
	Single	Dual
2	-V Input	-V Input
3	-V Input	-V Input
9	No pin	Common
11	N.C.	-V Output
14	+V Output	+V Output
16	-V Output	Common
22	+V Input	+V Input
23	+V Input	+V Input

Dimensions





Derating



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