

Series AM5TW-RVZ

5 Watt | DC-DC Converter



FEATURES:

- Wide Input Range (4:1)
- 24 Pin DIP Package
- Metal package
- High efficiency up to 82%
- Operating temperature -40°C to + 85°C
- Input / Output isolation 1500 VDC
- Pin compatible with multiple manufacturers
- Continuous short circuit protection



Models Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Capacitive load, max (μF)	Efficiency (%)
AM5TW-2403S-RVZ	9-36	3.3	1200	2200	70
AM5TW-2405S-RVZ	9-36	5	1000	1000	73
AM5TW-2412S-RVZ	9-36	12	416	470	74
AM5TW-2415S-RVZ	9-36	15	333	330	74
AM5TW-4803S-RVZ	18-72	3.3	1200	2200	68
AM5TW-4805S-RVZ	18-72	5	1000	1000	73
AM5TW-4812S-RVZ	18-72	12	416	470	74
AM5TW-4815S-RVZ	18-72	15	333	330	76

Models Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Capacitive load, max (μF)	Efficiency (%)
AM5TW-2405D-RVZ	9-36	±5	±500	±470	77
AM5TW-2412D-RVZ	9-36	±12	±208	±100	82
AM5TW-2415D-RVZ	9-36	±15	±166	±68	82
AM5TW-4805D-RVZ	18-72	±5	±500	±470	72
AM5TW-4812D-RVZ	18-72	±12	±208	±100	75
AM5TW-4815D-RVZ	18-72	±15	±166	±68	75

Input Specifications

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

Isolation Specifications

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

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage Balance	Balanced Load	±1		%
Voltage accuracy		±1		%
Short circuit protection	Continuous			
Short circuit restart	Auto Recovery			
Line voltage regulation		±0.5		%
Load voltage regulation		±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% load	100-400		KHz
Operating temperature	Full Load (see derating chart)	-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 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, $t=+25^{\circ}\text{C}$)			

Safety Specifications

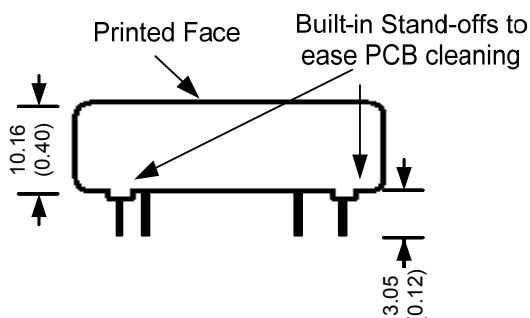
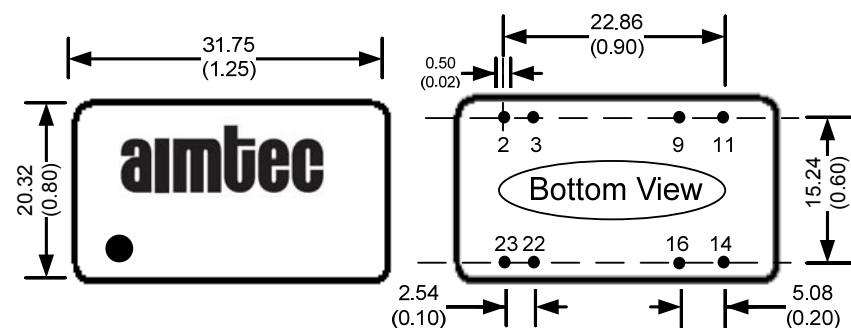
Parameters	
Standards	Designed to meet IEC 60950-1

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

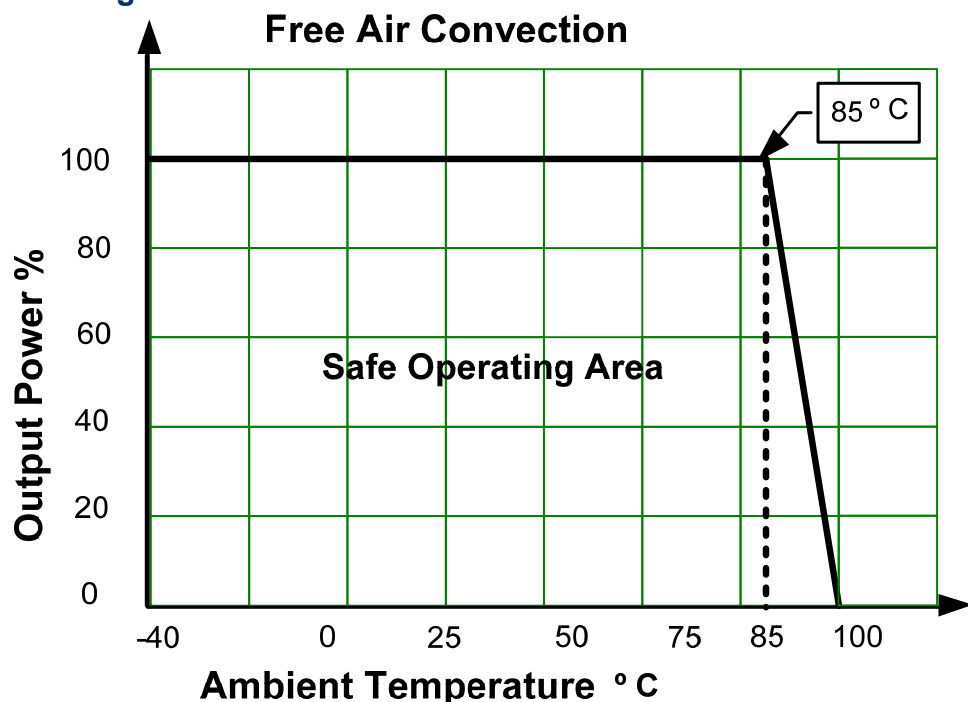
Pin	1500 VDC	
	Single	Dual
2	-V Input	-V Input
3	-V Input	-V Input
9	No pin	Common
11	N.C.	-V Output
14	+V Output	+V Output
16	-V Output	Common
22	+V Input	+V Input
23	+V Input	+V Input

Dimensions



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



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