

Series AM6TW-RZ

6 Watt | DC-DC Converter



FEATURES:

- RoHS compliant
- 24 Pin DIP Package
- Wide 4:1 input range
- High efficiency up to 85%
- Operating temperature -40 to + 85°C
- Input / Output Isolation 1500VDC
- Pin compatible with multiple manufacturers
- Continuous short circuit protection



Models

Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max Capacitive Load(uF)	Efficiency (%)
AM6TW-2403S-RZ	9-36	3.3	1400	1500	1000	75
AM6TW-2405S-RZ	9-36	5	1200	1500	1000	81
AM6TW-2407S-RZ	9-36	7.2	830	1500	470	82
AM6TW-2409S-RZ	9-36	9	660	1500	220	82
AM6TW-2412S-RZ	9-36	12	500	1500	1000	83
AM6TW-2415S-RZ	9-36	15	400	1500	470	83
AM6TW-2418S-RZ	9-36	18	330	1500	47	83
AM6TW-2424S-RZ	9-36	24	250	1500	47	82
AM6TW-4803S-RZ	18-72	3.3	1400	1500	1000	75
AM6TW-4805S-RZ	18-72	5	1200	1500	1000	81
AM6TW-4807S-RZ	18-72	7.2	830	1500	470	82
AM6TW-4809S-RZ	18-72	9	660	1500	220	82
AM6TW-4812S-RZ	18-72	12	500	1500	1000	82
AM6TW-4815S-RZ	18-72	15	400	1500	100	85
AM6TW-4818S-RZ	18-72	18	330	1500	10	83
AM6TW-4824S-RZ	18-72	24	250	1500	22	83

Models

Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max Capacitive Load(uF)	Efficiency (%)
AM6TW-2403D-RZ	9-36	±3.3	±700	1500	±470	80
AM6TW-2405D-RZ	9-36	±5	±600	1500	±680	82
AM6TW-2407D-RZ	9-36	±7.2	±410	1500	±220	82
AM6TW-2409D-RZ	9-36	±9	±330	1500	±100	82
AM6TW-2412D-RZ	9-36	±12	±250	1500	±330	84
AM6TW-2415D-RZ	9-36	±15	±200	1500	±100	80
AM6TW-2418D-RZ	9-36	±18	±165	1500	±10	80
AM6TW-2424D-RZ	9-36	±24	±125	1500	±22	81
AM6TW-4803D-RZ	18-72	±3.3	±700	1500	±330	79
AM6TW-4805D-RZ	18-72	±5	±600	1500	±470	82
AM6TW-4807D-RZ	18-72	±7.2	±410	1500	±220	81
AM6TW-4809D-RZ	18-72	±9	±330	1500	±100	81
AM6TW-4812D-RZ	18-72	±12	±250	1500	±100	83
AM6TW-4815D-RZ	18-72	±15	±200	1500	±47	81
AM6TW-4818D-RZ	18-72	±18	±165	1500	±22	81
AM6TW-4824D-RZ	18-72	±24	±125	1500	±22	81

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	24 48	9-36 18-72		VDC
Filter	π (Pi) Network			
Turn on Transient process time			350	ms

Input Specifications (continued)

Parameters	Nominal	Typical	Maximum	Units
Start up time		500		ms
Absolute Maximum Rating	24 Vin	-0.7-40		VDC
	48 Vin	-0.7-80		
Peak Input Voltage time		100		ms

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	3 sec		1500	VDC
Resistance		> 1000		MOhm
Capacitance		500		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±1		%
Voltage balance		±1		%
Short Circuit protection		Continuous		
Short circuit restart		Auto Recovery		
Over current protection		120% Iout		
Line voltage regulation (Single)		±0.5		%
Line voltage regulation (Dual)		±0.5		%
Load voltage regulation (Single)	0 – 100% load	±0.5		%
Load voltage regulation (Single)	0 – 100% load	±1.5		%
3.3V output model				
Load voltage regulation (Dual)	0 – 100% load	±0.5		%
Load voltage regulation (Dual) ±	0 – 100% load	±1.5		%
Temperature coefficient		±0.02		%/°C
Ripple & Noise	At 20MHz Bandwidth	60		mV p-p
Rising time		10		ms

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	260		KHz
Operating temperature	Full Load without Derating	-40 to +85		°C
Storage temperature		-40 to +125		°C
Max Case temperature			+100	°C
Cooling		Free air convection		
Humidity			90	%
Case material		Nickel coated copper		
Weight		26		g
Dimensions (L x W x H)	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		>1 050 000 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.

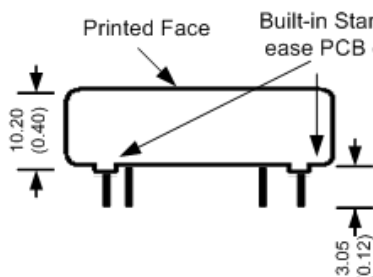
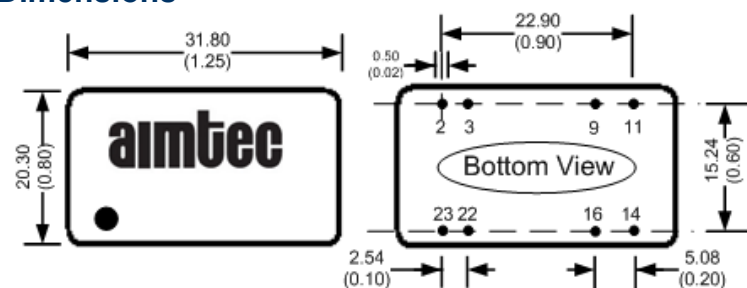
Safety Specifications

Parameters	
Agency Approval	CE
Standards	EN55022 Class A, EN55024
	IEC61000-4-2, Perf. Criteria B
	IEC61000-4-3, Perf. Criteria A
	IEC61000-4-4, Perf. Criteria B
	IEC61000-4-5, Perf. Criteria B
	IEC61000-4-6, Perf. Criteria A
	IEC61000-4-8, Perf. Criteria A
	NOTE: also designed to meet IEC 60950-1:2001

Pin Out Specifications

Pin	Single	Dual
1	Omitted	Omitted
2	-V Input	-V Input
3	-V Input	-V Input
9	Omitted	Common
10	Omitted	Omitted
11	N.C.	-V Output
12/13	Omitted	Omitted
14	+V Output	+V Output
15	Omitted	Omitted
16	-V Output	Common
22	+V Input	+V Input
23	+V Input	+V Input
24	Omitted	Omitted

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)

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