

Series AM6TW-Z

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°C to + 85°C
- Input / output isolation 1500 and 3500VDC
- 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(μF)	Efficiency (%)
AM6TW-2403SZ	9-36	3.3	1400	1500	1000	75
AM6TW-2405SZ	9-36	5	1200	1500	680	81
AM6TW-2407SZ	9-36	7.2	830	1500	680	78
AM6TW-2409SZ	9-36	9	660	1500	330	82
AM6TW-2412SZ	9-36	12	500	1500	100	83
AM6TW-2415SZ	9-36	15	400	1500	100	83
AM6TW-2418SZ	9-36	18	330	1500	100	83
AM6TW-2424SZ	9-36	24	250	1500	68	82
AM6TW-4803SZ	18-72	3.3	1400	1500	1000	75
AM6TW-4805SZ	18-72	5	1200	1500	680	81
AM6TW-4807SZ	18-72	7.2	830	1500	680	81
AM6TW-4809SZ	18-72	9	660	1500	330	82
AM6TW-4812SZ	18-72	12	500	1500	100	82
AM6TW-4815SZ	18-72	15	400	1500	100	85
AM6TW-4818SZ	18-72	18	330	1500	100	83
AM6TW-4824SZ	18-72	24	250	1500	68	83
AM6TW-2403SH35Z	9-36	3.3	1400	3500	1000	75
AM6TW-2405SH35Z	9-36	5	1200	3500	680	81
AM6TW-2407SH35Z	9-36	7.2	830	3500	680	78
AM6TW-2409SH35Z	9-36	9	660	3500	330	82
AM6TW-2412SH35Z	9-36	12	500	3500	100	83
AM6TW-2415SH35Z	9-36	15	400	3500	100	83
AM6TW-2418SH35Z	9-36	18	330	3500	100	83
AM6TW-2424SH35Z	9-36	24	250	3500	68	82
AM6TW-4803SH35Z	18-72	3.3	1400	3500	1000	75
AM6TW-4805SH35Z	18-72	5	1200	3500	680	81
AM6TW-4807SH35Z	18-72	7.2	830	3500	680	81
AM6TW-4809SH35Z	18-72	9	660	3500	330	82
AM6TW-4812SH35Z	18-72	12	500	3500	100	82
AM6TW-4815SH35Z	18-72	15	400	3500	100	85
AM6TW-4818SH35Z	18-72	18	330	3500	100	83
AM6TW-4824SH35Z	18-72	24	250	3500	68	83

Models

Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max Capacitive Load(μF)	Efficiency (%)
AM6TW-2403DZ	9-36	±3.3	±700	1500	±470	80
AM6TW-2405DZ	9-36	±5	±600	1500	±330	82
AM6TW-2407DZ	9-36	±7.2	±410	1500	±330	80
AM6TW-2409DZ	9-36	±9	±330	1500	±100	82
AM6TW-2412DZ	9-36	±12	±250	1500	±68	84
AM6TW-2415DZ	9-36	±15	±200	1500	±68	80
AM6TW-2418DZ	9-36	±18	±160	1500	±68	80

Models

Dual output (continued)

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max Capacitive Load(uF)	Efficiency (%)
AM6TW-2424DZ	9-36	±24	±125	1500	±22	81
AM6TW-4803DZ	18-72	±3.3	±700	1500	±470	79
AM6TW-4805DZ	18-72	±5	±600	1500	±330	82
AM6TW-4807DZ	18-72	±7.2	±410	1500	±330	81
AM6TW-4809DZ	18-72	±9	±330	1500	±100	81
AM6TW-4812DZ	18-72	±12	±250	1500	±68	83
AM6TW-4815DZ	18-72	±15	±200	1500	±68	81
AM6TW-4818DZ	18-72	±18	±160	1500	±68	81
AM6TW-4824DZ	18-72	±24	±125	1500	±22	81
AM6TW-2403DH35Z	9-36	±3.3	±700	3500	±470	80
AM6TW-2405DH35Z	9-36	±5	±600	3500	±330	82
AM6TW-2407DH35Z	9-36	±7.2	±410	3500	±330	80
AM6TW-2409DH35Z	9-36	±9	±330	3500	±100	82
AM6TW-2412DH35Z	9-36	±12	±250	3500	±68	84
AM6TW-2415DH35Z	9-36	±15	±200	3500	±68	80
AM6TW-2418DH35Z	9-36	±18	±160	3500	±68	80
AM6TW-2424DH35Z	9-36	±24	±125	3500	±22	81
AM6TW-4803DH35Z	18-72	±3.3	±700	3500	±470	79
AM6TW-4805DH35Z	18-72	±5	±600	3500	±330	82
AM6TW-4807DH35Z	18-72	±7.2	±410	3500	±330	81
AM6TW-4809DH35Z	18-72	±9	±330	3500	±100	81
AM6TW-4812DH35Z	18-72	±12	±250	3500	±68	83
AM6TW-4815DH35Z	18-72	±15	±200	3500	±68	81
AM6TW-4818DH35Z	18-72	±18	±160	3500	±68	81
AM6TW-4824DH35Z	18-72	±24	±125	3500	±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
Start up time		500		ms
Absolute Maximum Rating	24 Vin 48 Vin	-0.7-40 -0.7-80		VDC
Peak Input Voltage time		100		ms

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	3 sec		1500 or 3500	VDC
Resistance		> 1000		MOhm
Capacitance		470		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±1		%
Voltage balance	Dual Output	±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		%

Output Specifications (continued)

Parameters	Conditions	Typical	Maximum	Units
Load voltage regulation (Single)	0 – 100% load	±0.5		%
Load voltage regulation (Single) 3,3V output model	0 – 100% load	±1.5		%
Load voltage regulation (Dual)	0 – 100% load	±0.5		%
Load voltage regulation (Dual) ±3.3V output model	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
Derating		Not-Required		
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	1.28 x 0.84 x 0.41 inches	32.25 x 21.35 x 10.50 mm	
MTBF		>960 000 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

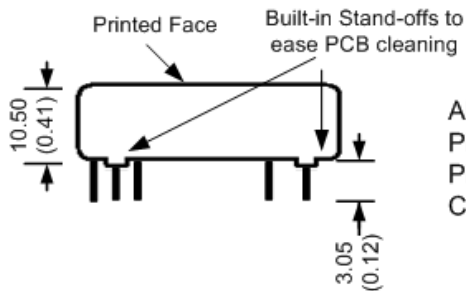
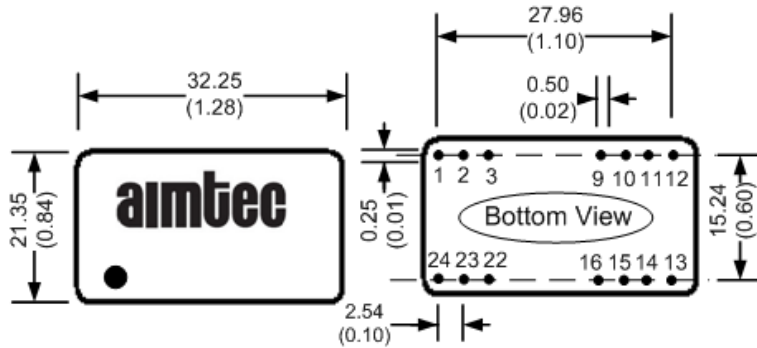
Safety Specifications

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 (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
	NOTE: Also designed to meet IEC60950-1:2001

Pin Out Specifications

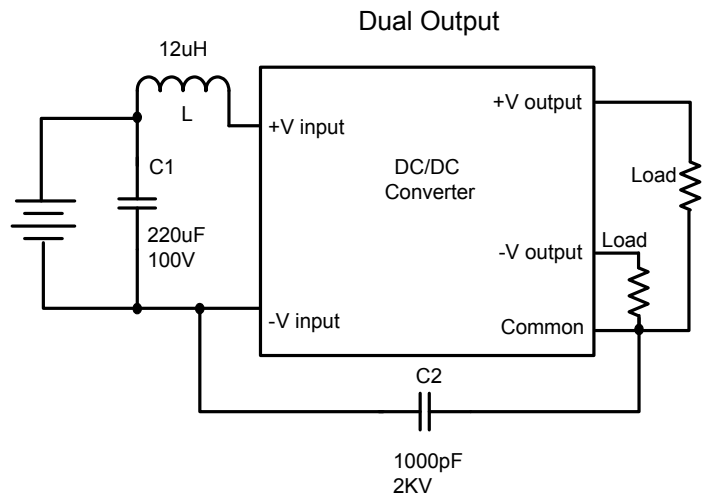
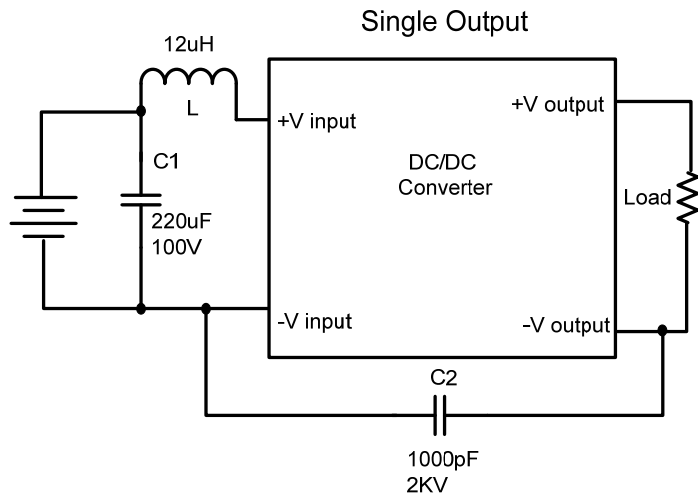
Pin	1500VDC		3500VDC	
	Single	Dual	Single	Dual
1	+V Input	+V Input	Omitted	Omitted
2	N. C.	-V Output	-V Input	-V Input
3	N. C.	Common	-V Input	-V Input
9	Omitted	Omitted	Omitted	Common
10	-V Output	Common	Omitted	Omitted
11	+V Output	+V Output	N.C.	-V Output
12/13	-V Input	-V Input	Omitted	Omitted
14	+V Output	+V Output	+V Output	+V Output
15	-V Output	Common	Omitted	Omitted
16	Omitted	Omitted	-V Output	Common
22	N. C.	Common	+V Input	+V Input
23	N. C.	-V Output	+V Input	+V Input
24	+V Input	+V Input	Omitted	Omitted

Dimensions

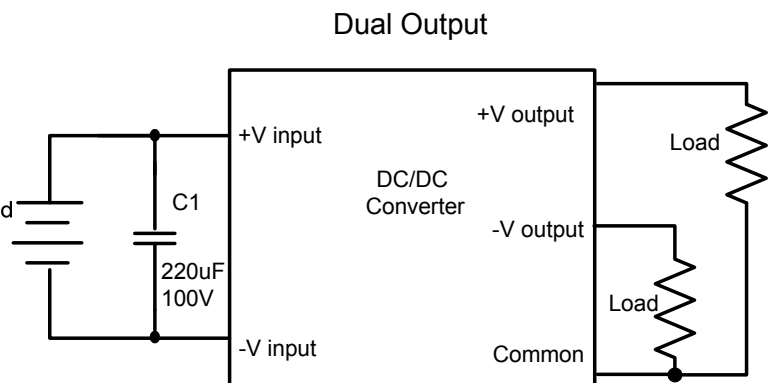
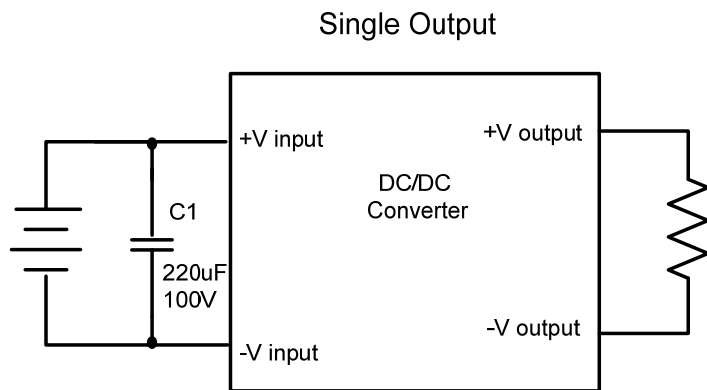


All dimensions are typical: millimeters (inches)
 Pin Diameter: 0.50 ± 0.05 (0.02 ± 0.002)
 Pin Pitch Tolerance: ± 0.35 (± 0.014)
 Case Tolerance: ± 0.5 (± 0.02)

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 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.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Isolated DC/DC Converters](#) category:

Click to view products by [Aimtec](#) manufacturer:

Other Similar products are found below :

[ESM6D044440C05AAQ](#) [FMD15.24G](#) [PSL486-7LR](#) [PSR152.5-7IR](#) [Q48T30020-NBB0](#) [AVO240-48S12B-6L](#) [AVO250-48S28B-6L](#) [NAN-0505](#) [HW-L16D](#) [JAHW100Y1](#) [217-1617-001](#) [22827](#) [SPB05C-12](#) [SQ24S15033-PS0S](#) [18952](#) [19-130041](#) [CE-1003](#) [CE-1004](#) [GQ2541-7R](#) [PSE1000DCDC-12V](#) [RDS180245](#) [MAU228](#) [419-2065-201](#) [449-2075-101](#) [J80-0041NL](#) [V300C24C150BG](#) [419-2062-200](#) [419-2063-401](#) [419-2067-101](#) [419-2067-501](#) [419-2068-001](#) [DCG40-5G](#) [DFC15U48D15](#) [449-2067-000](#) [XGS-0512](#) [XGS-1205](#) [XGS-1212](#) [XGS-2412](#) [XGS-2415](#) [XKS-1215](#) [033456](#) [NCT1000N040R050B](#) [SPB05B-15](#) [SPB05C-15](#) [SSQE48T25025-NAA0G](#) [L-DA20](#) [HP3040-9RG](#) [HP1001-9RTG](#) [XKS-2415](#) [XKS-2412](#)