Series AM6CW-FZ

6 Watt | DC-DC Converter

FEATURES:

- Wide 4:1 Input Voltage Range
- High efficiency up to 85%
- Remote On/Off
- Standard 1”x1” Package
- 1500 VDC Isolation
- Operating Temperature -40ºC to +85ºC
- Over Load and Over Voltage protection
- Continuous Short Circuit Protection

RoHS

Models
Single output

Model	Input Voltage (V)	Max Input Current Full load/No load (mA)	Output Voltage (V)	Output Current max (mA)	Max Capacitive Load (uF)	Efficiency (%)
AM6CW-2403S-FZ	9-36	268/8	3.3	1450	1000	78
AM6CW-2405S-FZ	9-36	329/8	5	1200	680	80
AM6CW-2409S-FZ	9-36	320/11	9	667	247	82
AM6CW-2412S-FZ	9-36	317/10	12	500	220	83
AM6CW-2415S-FZ	9-36	318/10	15	400	147	83
AM6CW-2424S-FZ	9-36	318/15	24	250	47	83
AM6CW-4803S-FZ	18-75	134/5	3.3	1450	1000	78
AM6CW-4805S-FZ	18-75	164/6	5	1200	680	80
AM6CW-4809S-FZ	18-75	158/6	9	667	247	83
AM6CW-4812S-FZ	18-75	157/6	12	500	220	83
AM6CW-4815S-FZ	18-75	154/5	15	400	147	85
AM6CW-4824S-FZ	18-75	158/8	24	250	47	83

Models
Dual output

Model	Input Voltage (V)	Max Input Current Full load/No load (mA)	Output Voltage (V)	Output Current max (mA)	Max Capacitive Load (uF)	Efficiency (%)
AM6CW-2405D-FZ	9-36	328/10	±5	±600	±330	80
AM6CW-2412D-FZ	9-36	319/12	±12	±250	±100	82
AM6CW-2415D-FZ	9-36	322/15	±15	±200	±68	82
AM6CW-4805D-FZ	18-75	164/5	±5	±600	±330	80
AM6CW-4812D-FZ	18-75	158/7	±12	±250	±100	83
AM6CW-4815D-FZ	18-75	158/8	±15	±200	±68	84

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.

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	24	9-36		VDC
	48	18-75		
Filter		Pi		
Startup time			530	ms
Absolute Maximum Rating	24		50	VDC
	48		100	
Peak Input Voltage time			100	ms
On/Off control		ON –Open or 3.5 to 12V/<0.2mA		
		OFF –Short to pin 2 (-Vin) or 0 to 1.2V		
Idle Input Current	At OFF state		2.5	mA
Transient response settling time	50% load step change		720	µs
Transient response deviation	di/dt=0.8A/µs		≤5	%
Input reflected ripple current		170		mA

Isolation Specifications

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage		1500		VDC
Resistance	500VDC		>1000	MOhm
Capacitance		280		pF

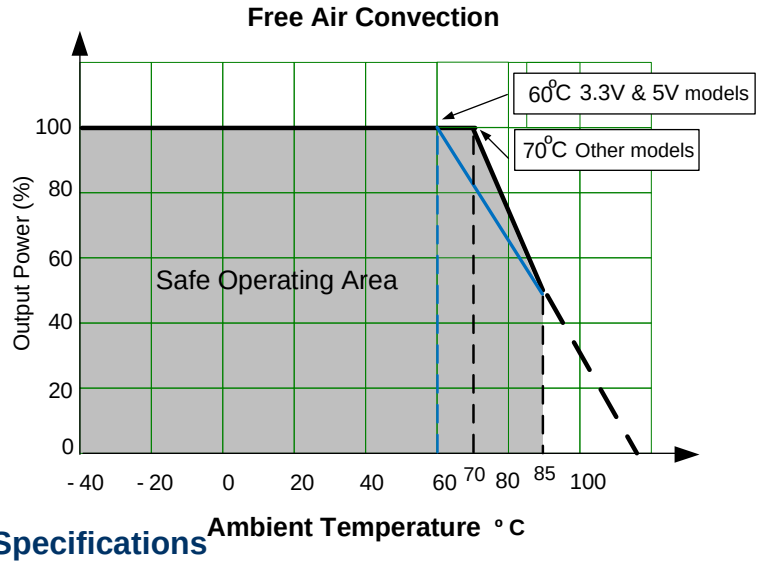
Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2		%
Over voltage protection	Zener diode clamp, 3.3V		3.0	V
	Zener diode clamp, 5V		6.2	
	Zener diode clamp, 9V		11	
	Zener diode clamp, 12V		15	
	Zener diode clamp, 15V		18	
	Zener diode clamp, 24V		27	
Over Load protection	Full load	>110		%
Short Circuit protection	Continuous			
Short circuit restart	Auto-Recovery			
Line voltage regulation	LL to HL at full load	±0.5		% of Vin
Load voltage regulation (single)	25% to Full load	±0.5		%
Load voltage regulation (dual)	Balanced load	±0.5		%
Cross regulation	25% load on one, 100% load on other	±5		%
Temperature coefficient			±0.02	%/ºC
Ripple & Noise	20MHz Bandwidth	80		mV p-p

General Specifications

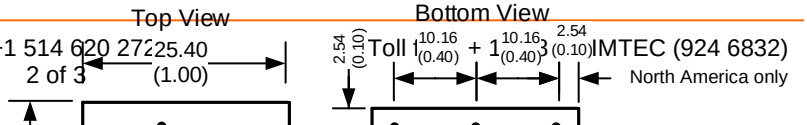
Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	300kHz		KHz
Operating temperature	See derating curve	-40 to +85		ºC
Storage temperature	-55 to +105			ºC
Maximum case temperature			100	ºC
Cooling	Natural convection			
Humidity			95	% RH
Case material	Nickel-coated copper			
Weight	17			g
Dimensions (L x W x H)	1 x 1 x 0.4 inches 25.4 x 25.4 x 10.2 mm			
MTBF	>1,000,000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			
Soldering temperature	1.5mm from case for 10 sec.		260	ºC

Derating



Pin Out Specifications

Dimensions



Pin	Single	Dual
1	+V input	+V input
2	-V Input	-V Input
3	On/Off Control	On/Off Control
4	+V Output	+V Output
5	No Pin	Common
6	-V output	-V output

Notes:
All dimensions are typical in millimeters (inches).
Pin Pitch Tolerance ±0.35 (±0.014)
Case Tolerance ±0.50 (±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 the ones listed in this datasheet. **7.** Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.