

Series AM15EW-Z

15 Watt | DC-DC Converter

FEATURES:



- RoHS compliant
- Efficiency up to 86%
- Wide 4:1 input range
- Continuous Short Circuit Protection
- Low ripple and noise
- Remote on/off control
- Input/Output Isolation 1500VDC
- Operating temperature -40°C to + 85°C

Models Single output



Model	Input Voltage (V)	Output Voltage (V)	Output Current max (A)	Capacitive load (µF)	Efficiency (%)
AM15EW-2403SZ	9-36	3.3	3	3300	80
AM15EW-2405SZ	9-36	5	3	3300	83
AM15EW-2412SZ	9-36	12	1.25	680	85
AM15EW-2415SZ	9-36	15	1	470	86
AM15EW-4803SZ	18-72	3.3	3	3300	80
AM15EW-4805SZ	18-72	5	3	3300	83
AM15EW-4812SZ	18-72	12	1.25	680	85
AM15EW-4815SZ	18-72	15	1	470	86

Add suffix "-K" for optional heatsink

Models Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (A)	Capacitive load (µF)	Efficiency (%)
AM15EW-2405DZ	9-36	±5	±1.5	±2200	83
AM15EW-2412DZ	9-36	±12	±0.625	±470	85
AM15EW-2415DZ	9-36	±15	±0.5	±330	86
AM15EW-4805DZ	18-72	±5	±1.5	±2200	83
AM15EW-4812DZ	18-72	±12	±0.625	±470	85
AM15EW-4815DZ	18-72	±15	±0.5	±330	86

Add suffix "-K" for optional heatsink

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	24	9-36		VDC
	48	18-72		
Filter	π (Pi) Network			
Remote ON/OFF Control	ON	2.5~5.5 or open circuit		VDC
	OFF	-0.7~ 0.8 or short circuit b/n pin 2 & 1		
Turn on Transient process time			350	ms
Start up time		20		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
Case/ Input & Output		1000		VDC
Resistance		> 1000		MOhm
Capacitance		1200		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±1		%
Voltage balance (Dual Output)	Balance Load	±1		%
Short Circuit protection		Continuous		
Short Circuit restart		Auto Recovery		
Current limiting			140	% of Iout max
Line voltage regulation	HL-LL	±0.5		%
Load voltage regulation	0-100% load	±1.0		%
Temperature coefficient		±0.02		%/°C
Ripple & Noise	At 20Mhz bandwidth	75		mV p-p
Rising time		10		ms

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	300		KHz
Operating temperature	Derating above 60°C	-40 to +85		°C
Storage temperature		-40 to +125		°C
Maximum Case temperature			100	°C
Cooling	Free air convection			
Humidity			95	%
Case material	Nickel coated copper			
Weight	Regular models		31	g
	Optional -K Models		42.2	
Dimensions (L x W x H)	Tolerance	Regular models	2.00 x 1.00 x 0.40 inches	50.80 x 25.40 x 10.16 mm
	±0.5mm	Optional -K models	2.00 x 1.00 x 0.64 inches	50.80 x 25.40 x 16.30 mm
MTBF	>1 121 000 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.

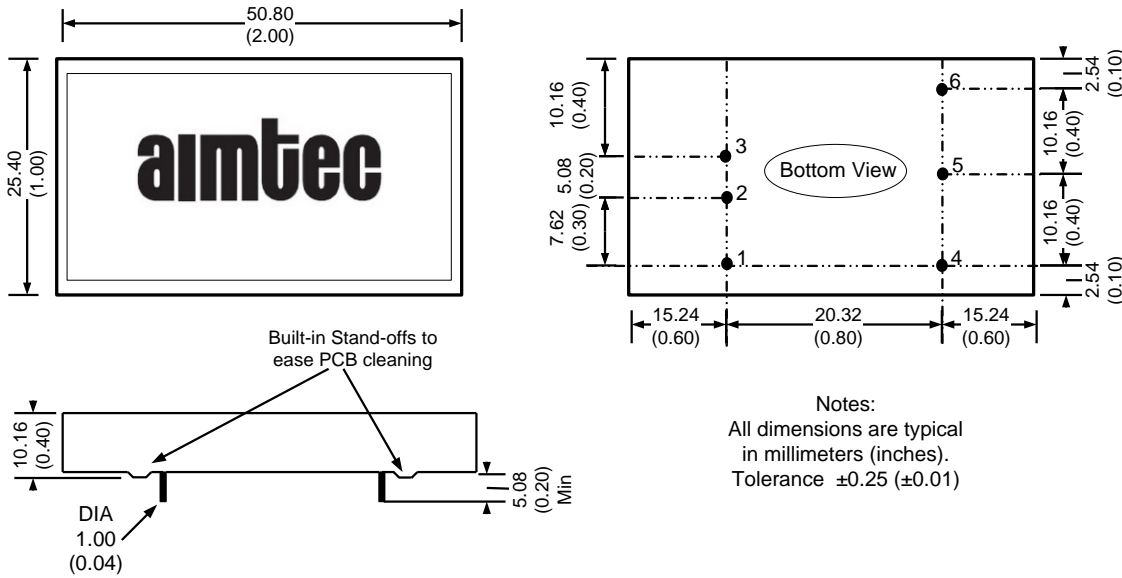
Safety Specifications

Standards	
Agency Approvals	CE, cULus(with exception of " -K " models)
Standards	IEC/UL/EN/62368-1
	EN55032 Class A
	IEC61000-4-2, Perf. Criteria B
	IEC61000-4-3, Perf. Criteria A
	IEC61000-4-4, Perf. Criteria B
	IEC61000-4-6, Perf. Criteria A
	IEC61000-4-8, Perf. Criteria A

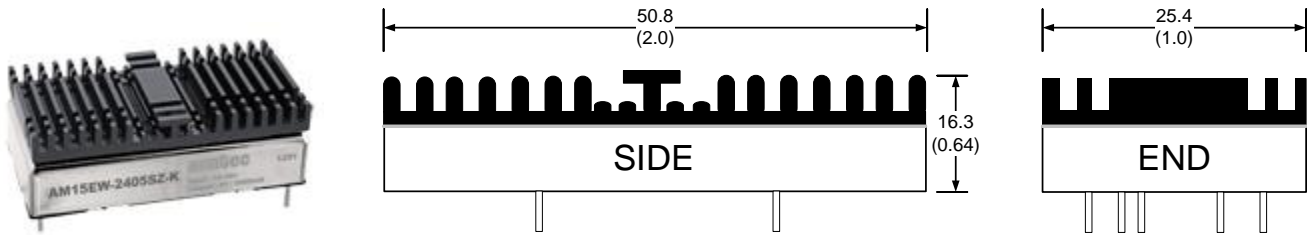
Pin Out Specifications

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

Dimensions



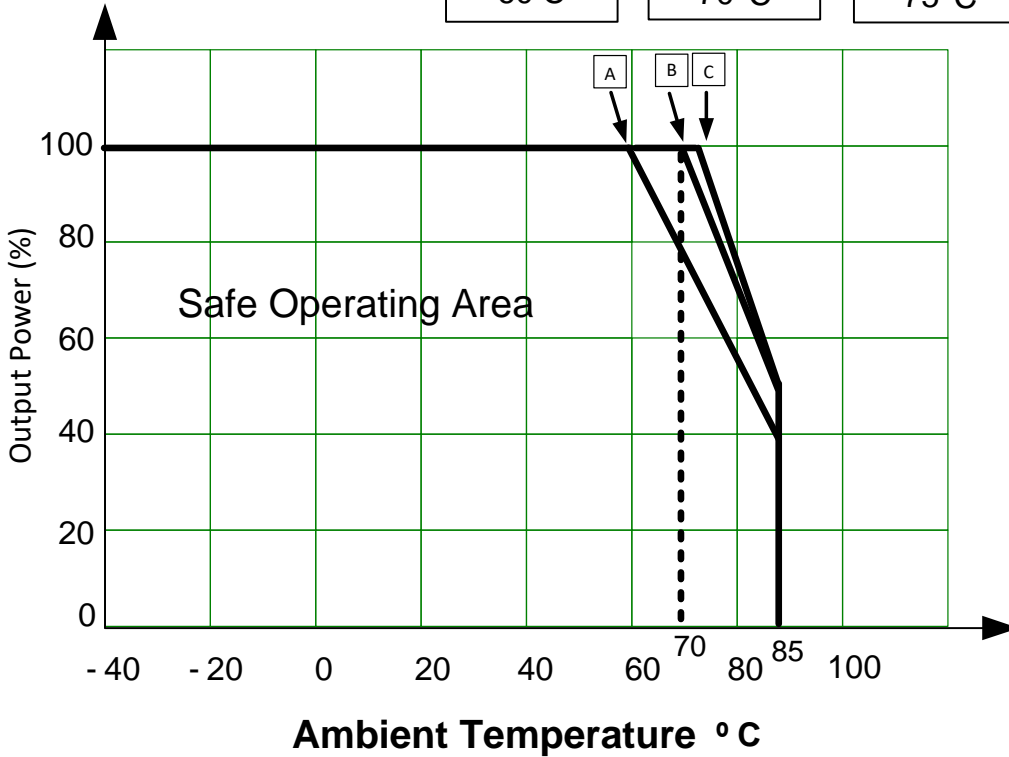
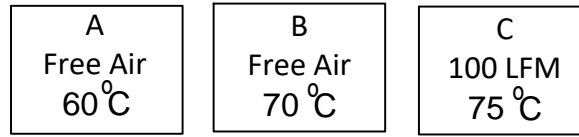
Dimensions with Optional Heatsink



Notes: Add "-K" suffix for ordering, heatsink is affixed with thermally dissipative adhesive tape. See derating graph for temperature performance. Heatsink material is anodized (black) aluminum, adds weight 11.2g to total mass (42.2g). Thermal impedance of converter is: with heatsink 10°C/W and 12°C/W without heatsink.

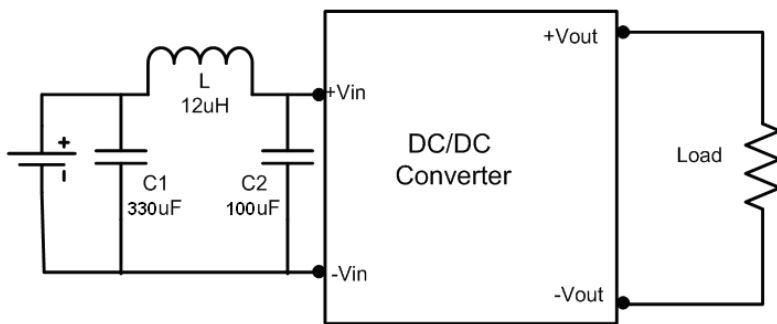
Derating

Test Circuit



Extended temperature performance can be achieved with optional heat sink. (add suffix “-K” to part number)

Conducted Emissions:



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.