



FEATURES:

- Ultra-compact footprint 1"x1"
- Ultra - Wide Input Range 4:1
- 1600 VDC Isolation
- Remote ON/OFF Function
- No Minimum Load Required
- Adjustable Output Voltage
- Operating Temperature -40°C to +75°C
- Over Current and Over Voltage Protection
- Efficiency up to 90%
- RoHS Compliant



Models: Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (A)	Isolation (VDC)	Max Capacitive Load (uF)	Efficiency (%)
AM20CW-2403SZ	9-36	3.3	4.5	1600	10000	88
AM20CW-2405SZ	9-36	5	4	1600	5000	89
AM20CW-2412SZ	9-36	12	1.67	1600	850	89
AM20CW-2415SZ	9-36	15	1.33	1600	700	89
AM20CW-4803SZ	18-75	3.3	4.5	1600	10000	88
AM20CW-4805SZ	18-75	5	4	1600	5000	89
AM20CW-4812SZ	18-75	12	1.67	1600	850	89
AM20CW-4815SZ	18-75	15	1.33	1600	700	89

Models: Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (A)	Isolation (VDC)	Max Capacitive Load (uF)	Efficiency (%)
AM20CW-2412DZ	9-36	±12	±0.833	1600	±470	89
AM20CW-2415DZ	9-36	±15	±0.667	1600	±330	89
AM20CW-4812DZ	18-75	±12	±0.833	1600	±470	89
AM20CW-4815DZ	18-75	±15	±0.667	1600	±330	89

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	π			
Start up time	Nominal Vin with constant resistive load		30	ms
Absolute Maximum Rating	24 Vin		50	VDC
	48 Vin		100	
Peak Input Voltage time			100	ms
On/Off control	ON –3 to 12VDC (or open)			
	OFF – 0 to 1.2VDC or short pin 2 to pin 3; OFF idle current – 5mA			
No load current			50	mA
Under voltage lockout	24 Vin ON/OFF	8.6/7.9		VDC
	48 Vin ON/OFF	17.8/15.5		
Input reflected ripple current		30		mA p-p

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		1600	VDC
Case to Input		1600		VDC
Case to Output		1600		VDC
Resistance		>1000		MOhm
Capacitance		1500		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy			±1	%
Cross Regulation (Dual Output Models)	25% load on one output - 100% load on second load	±5		%
Over voltage protection	Zener Diode Clamp	120		%
Over current protection	Full Load	150		%
Short Circuit protection	Continuous			
Short circuit restart	Auto-Recovery			
Line voltage regulation	HL-LL		±0.5	%
Load voltage regulation (Single)	0% to 100% load		±0.5	%
Load voltage regulation (Dual)	0% to 100% balanced load		±1	%
Temperature coefficient		±0.02		%/°C
Ripple & Noise*	20MHz Bandwidth		100	mV p-p
Ripple & Noise (3.3V/5V Output models)*	20MHz Bandwidth		75	mV p-p
Voltage adjustment range	Trim - Single output models only		±10	%

* Measured with a 1.0µF ceramic capacitor and 10µF tantalum capacitor.

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	330		KHz
Operating temperature	With derating above +55°C	-40 to +75		°C
Storage temperature		-55 to +125		°C
Maximum case temperature			105	°C
Derating		2.33		%/°C
Cooling	Free air convection (30-65LFM)			
Humidity			95	% RH
Case material	Nickel-coated copper			
Weight		19		g
Dimensions (L x W x H)	1.00 x 1.00 x 0.41 inches	25.40 x 25.40 x 10.40 mm		
MTBF	> 560,000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			
Maximum soldering temperature	1.5mm from case for 10 sec		260	°C
Transient recovery time	Load step change 75% to 50% to 25%	250		µS
Transient recovery deviation	Load step change 75% to 50% to 25%		±3	%

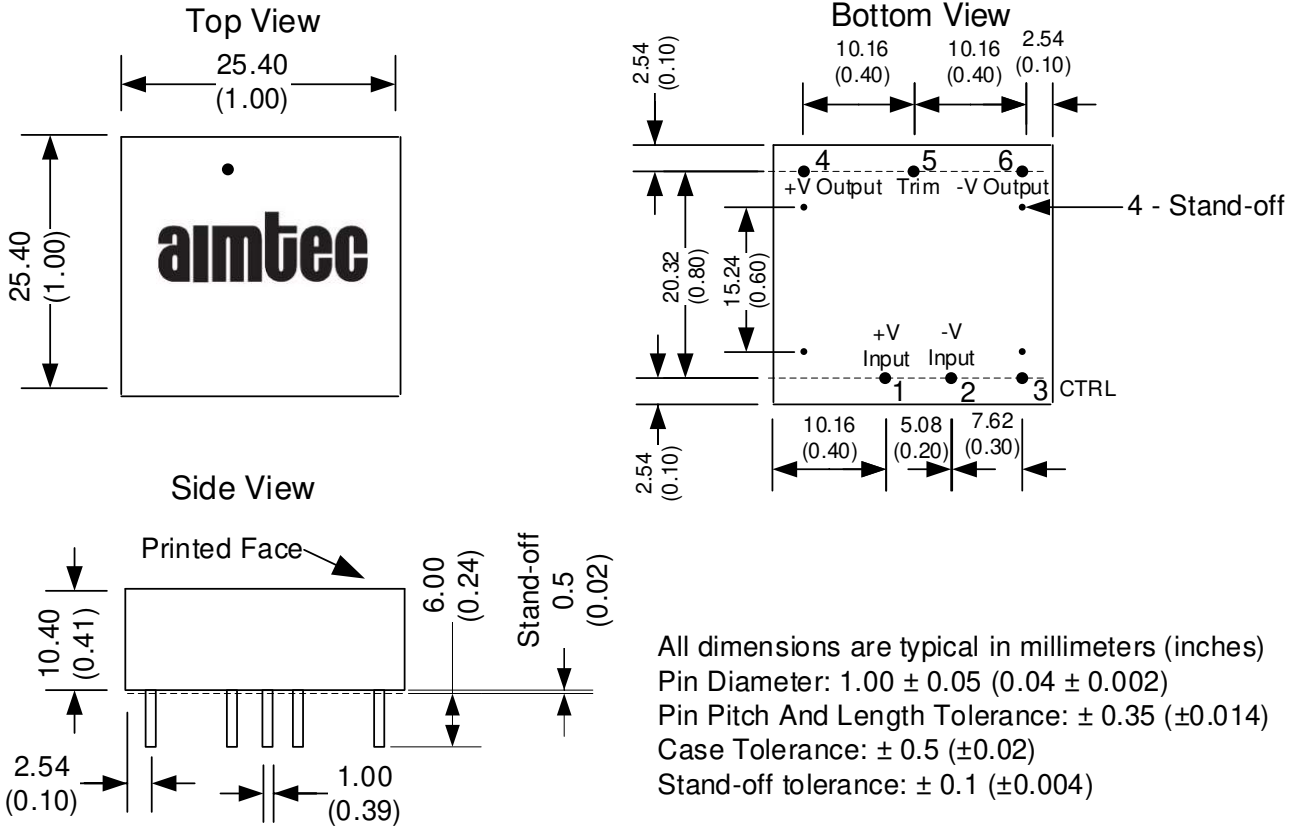
Safety Specifications

Parameters	
Agency Approval	CE , UL
Standards	UL60950-1, UL62368-1
	EN55032, Class A
	IEC61000-4-2 Perf. Criteria A
	IEC61000-4-3 Perf. Criteria A
	IEC61000-4-4 Perf. Criteria A (external 220uF/100V cap required)
	IEC61000-4-5 Perf. Criteria A (external 220uF/100V cap required)
	IEC61000-4-6 Perf. Criteria A
	IEC61000-4-8 Perf. Criteria A

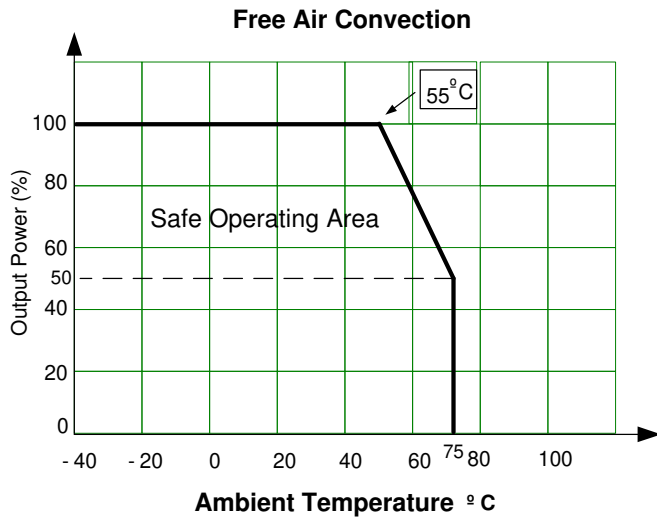
Pin Out Specifications

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	Trim	Common
6	- V output	- V output

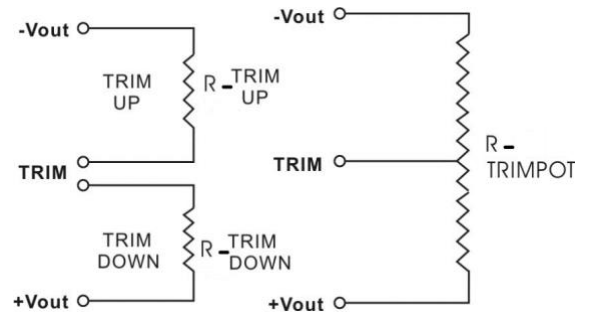
Dimensions



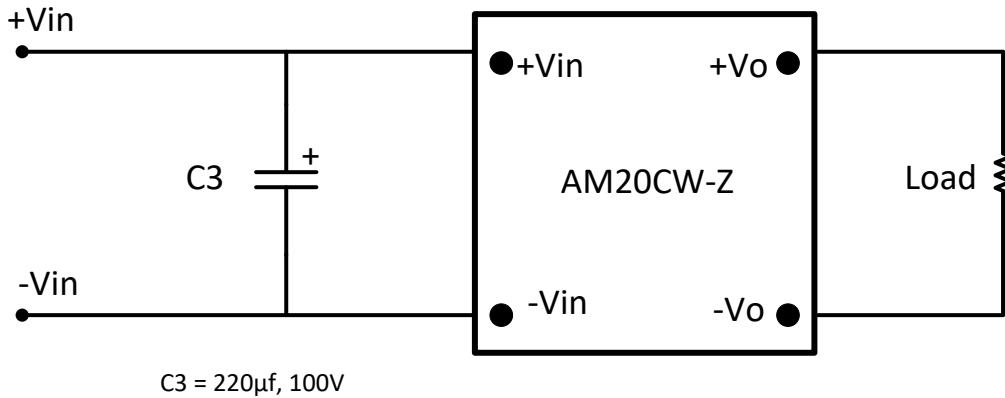
Derating



Trimming



Typical Application Circuit



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.