



FEATURES:

- Wide Input 2:1 Range
- No Minimum Load Required
- Soft Start
- Efficiency up to 91%
- Adjustable Output Voltage
- Remote ON/OFF Function
- Operating temperature -40°C to + 85°C
- Over Load, Voltage, Temperature & Short Circuit Protection

Models
Single output



Model	Input Voltage (V)	Output Voltage (V)	Output Current max (A)	Isolation (VDC)	Efficiency (%)
AM60U-2403SZ	18-36	3.3	14	1600	91
AM60U-2405SZ	18-36	5	12	1600	91
AM60U-2412SZ	18-36	12	5	1600	90
AM60U-2415SZ	18-36	15	4	1600	90
AM60U-4803SZ	36-75	3.3	14	1600	91
AM60U-4805SZ	36-75	5	12	1600	91
AM60U-4812SZ	36-75	12	5	1600	91
AM60U-4815SZ	36-75	15	4	1600	91

Add suffix "-K" for optional heatsink

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	18-36		VDC
	48	36-75		
Filter	π(Pi) Network			
Start up time		20		ms
Absolute Maximum Rating	24		~0.7~50	VDC
	48		~0.7~100	
Peak Input Voltage time			100	ms
Input reflected ripple current		20		mA p-p
Under Voltage Lockout (On/Off)	(24V model) 17.8	16		VDC
	(48V model) 33.5	30.5		
CNTL On / OFF	ON: 3 ~12Vdc or Open Circuit OFF: 0 ~ 1.2Vdc or Short pin 2 & 3 (idle current 5mA typical)			VDC

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	3 sec		1600	VDC
Case Input & Output	3 sec		1600	VDC
Resistance		>1000		MOhm
Capacitance		2000		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±1		%
Over voltage protection		Zener Diode Clamp		
Over load protection	Hiccup	135		%
Short Circuit protection		Continuous		
Short circuit restart		Auto-Restart		
Thermal shutdown	On Case	120		°C
Line voltage regulation		±0.5		% of Vin

Output Specifications (continued)

Parameters	Conditions	Typical	Maximum	Units
Load voltage regulation	0% to 100% Full Load	±0.5		%
Temperature coefficient		±0.02		%/°C
Ripple & Noise	20MHz Bandwidth (3.3 & 5V) 20MHz Bandwidth (12 & 15V)	75 100		mV p-p
Transient Response Deviation		±3		% of Max
Transient Recovery		250		µsec
Voltage adjustment range		±10		%

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	270		KHz
Operating temperature	With derating above 40 °C (see graph below)	-40 to +85		°C
Storage temperature		-40 to +125		°C
Maximum case temperature			110	°C
Derating	Above 40 °C	2		%/°C
Cooling		Free Air Convection		
Humidity			95	% RH
Case material		Nickel – coated Copper		
Weight		70		g
Dimensions (L x W x H)		2.00 x 2.00 x 0.40 inches	50.81 x 50.81 10.14 mm	
MTBF		>110 000 hrs (MIL-HDBK-217 F at +25 °C)		
Maximum soldering temperature	1.5mm from case for 10 sec	260		°C

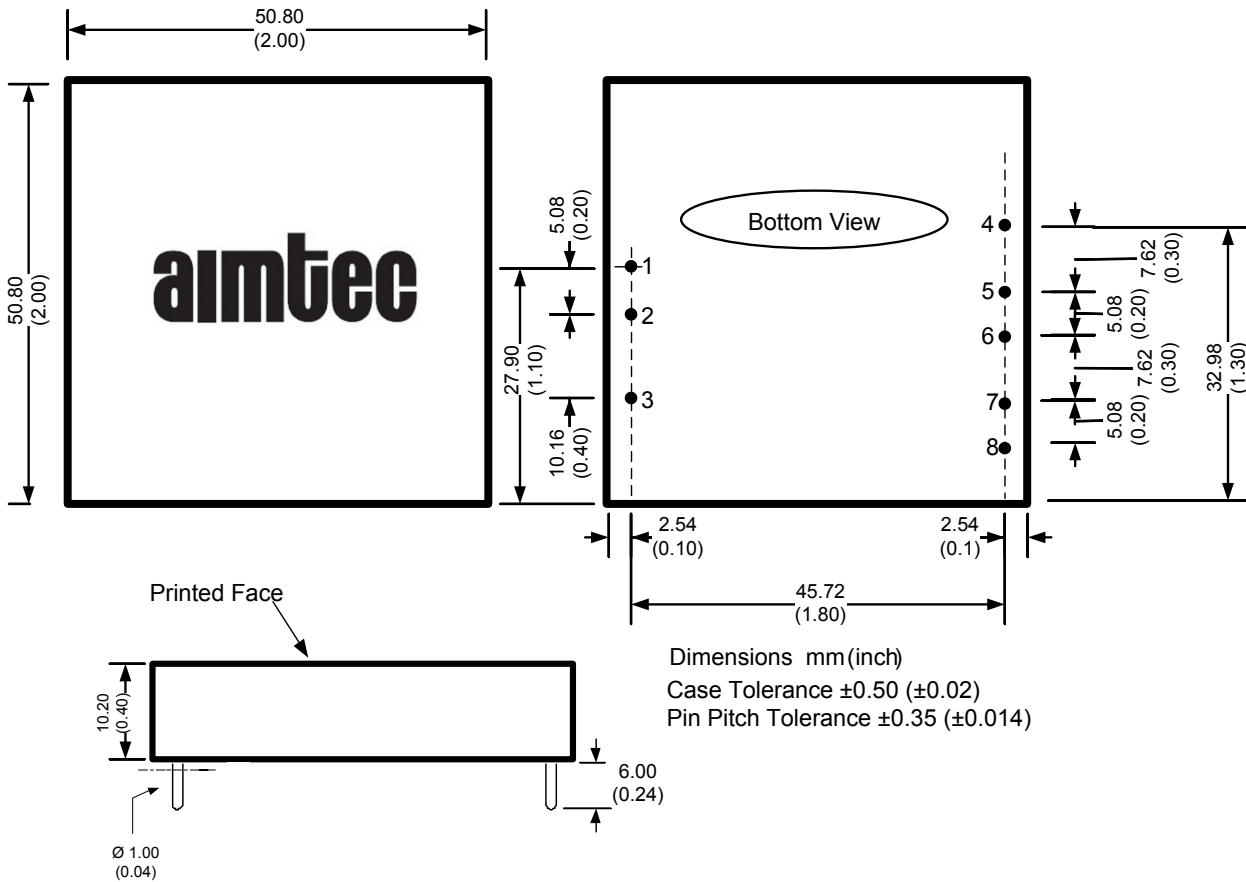
Safety Specifications

Parameters	
Standards	Designed to meet IEC 60950-1:2001 and EN55022:2006 + A1:2007, Class B Internal EMI Filter designed to meet EN55022 Class A

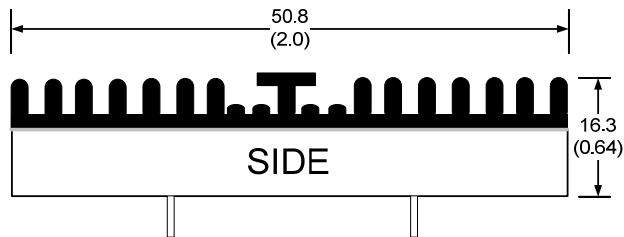
Pin Out Specifications

Pin	Single
1	+V Input
2	-V Input
3	On/Off Control
4	-Sense
5	+Sense
6	+V Output
7	-V Output
8	Trim

Dimensions

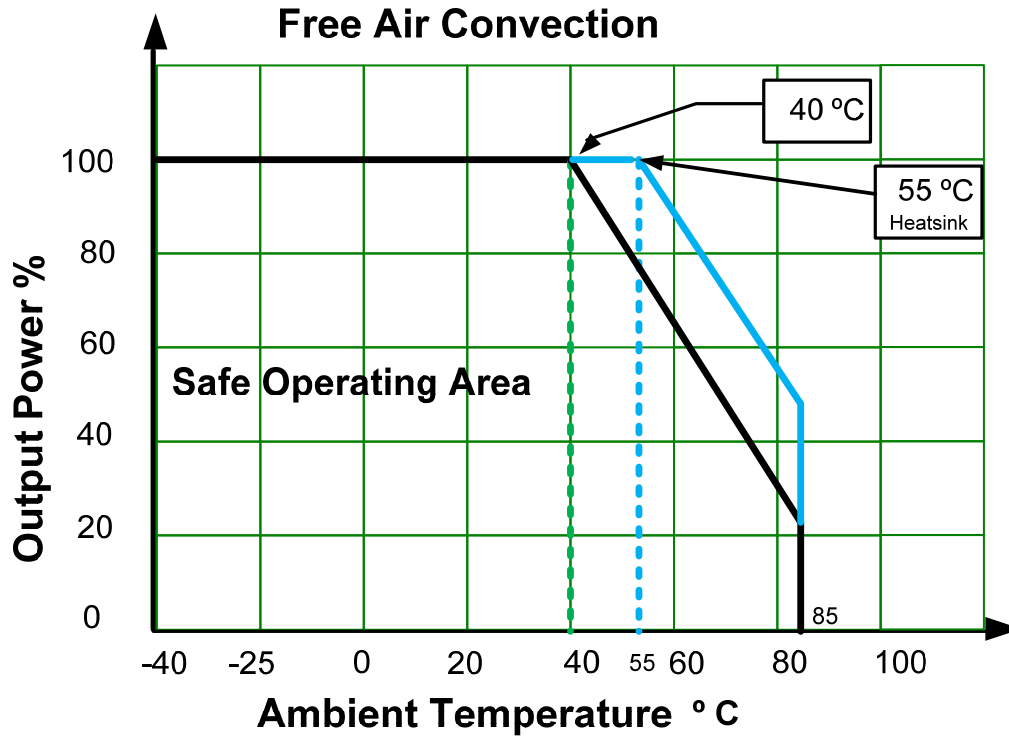


Dimensions with Optional Heatsink



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 22g to total mass (70g). Thermal impedance of converter is: without heatsink 11°C/W and 8.4°C/W with heatsink.

Derating

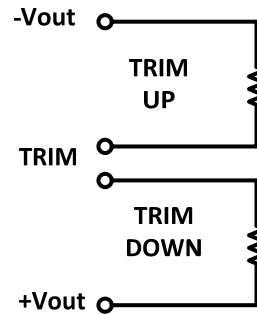


Extended temperature performance can be achieved with optional heatsink. (add suffix “-K” to part number)

Trimming

AM60U-xx03SZ		
% Trim	Trim-up KΩ	Trim-down KΩ
1	544.6	315.9
2	184.0	172.3
3	103.3	112.5
4	67.7	79.8
5	47.7	59.2
6	34.8	44.9
7	25.9	34.5
8	19.3	26.6
9	14.2	20.4
10	10.3	15.3

AM60U-xx05SZ		
% Trim	Trim-up KΩ	Trim-down KΩ
1	244.5	230.6
2	113.8	106.2
3	70.6	64.3
4	49.1	43.3
5	36.3	30.6
6	27.7	22.2
7	21.6	16.2
8	17.0	11.7
9	13.4	8.1
10	10.6	5.3



AM60U-xx12SZ

% Trim	Trim-up K Ω	Trim- down K Ω
1	371.4	327.4
2	183.6	142.1
3	117.6	83.9
4	83.9	55.5
5	63.5	38.6
6	49.8	27.4
7	39.9	19.5
8	32.5	13.5
9	26.7	8.9
10	22.1	5.3

AM60U-xx15SZ

% Trim	Trim-up K Ω	Trim- down K Ω
1	347.3	433.8
2	178.5	174.9
3	115.2	100.9
4	82.1	65.9
5	61.7	45.5
6	47.9	32.1
7	37.9	22.6
8	30.3	15.6
9	24.4	10.2
10	19.7	5.8

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.

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