aimtec
Your Power Partner

Series AM40U-AZ
40 Watt | DC-DC Converter

FEATURES:

- Wide Input 2:1 Range
- Full Internal SMD Technology
- 1600 VDC Isolation
- Efficiency up to 89%
- Adjustable Output Voltage
- Remote ON/OFF Function
- Over Load, Voltage & Short Circuit Protection
- Operating temperature -40°C to + 85°C

RoHS

Models
Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (A)	Isolation (VDC)	Efficiency (%)
AM40U-1203SAZ	9-18	3.3	8	1600	85
AM40U-1205SAZ	9-18	5	8	1600	86
AM40U-1212SAZ	9-18	12	3.3	1600	86
AM40U-1215SAZ	9-18	15	2.6	1600	87
AM40U-2403SAZ	18-36	3.3	8	1600	86
AM40U-2405SAZ	18-36	5	8	1600	88
AM40U-2412SAZ	18-36	12	3.3	1600	88
AM40U-2415SAZ	18-36	15	2.6	1600	89
AM40U-4803SAZ	36-75	3.3	8	1600	87
AM40U-4805SAZ	36-75	5	8	1600	88
AM40U-4812SAZ	36-75	12	3.3	1600	89
AM40U-4815SAZ	36-75	15	2.6	1600	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	12	9-18		VDC
	24	18-36		
	48	36-75		
Filter		π(Pi) Network		
Start up time		25		ms
Absolute Maximum Rating	12		36	VDC
	24		50	
	48		100	
Peak Input Voltage time			100	ms
Input reflected ripple current		20		mA p-p
Remote CNTL (ON/OFF)	ON – Open or without any connection or 3.5V ≤ 12V OFF- Short to input ground or 0V ≤ 1.2V			

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	3 sec		1600	VDC
Resistance		>1000		MOhm
Capacitance		220		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2		%
Over voltage protection		Zener Diode Clamp		
Over load protection	Foldback	135~150		%
Short Circuit protection		Continuous		
Short circuit restart		Auto-Restart		
Thermal shutdown	On Case	110		ºC

Output Specifications (continued)

Parameters	Conditions	Typical	Maximum	Units
Line voltage regulation	HL-LL	±1		% of Vin
Load voltage regulation (Single)	Iout=10% to 100%	±2		%
Temperature coefficient		±0.02		%/°C
Ripple & Noise	20MHz Bandwidth	75		mV p-p
Voltage adjustment range (TRIM)		±10		%

Sense and Trim outputs can be left open, unconnected if not in use.

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	300		KHz
Operating temperature	With derating above 55 °C (see graph below)	-40 to +85		°C
Storage temperature	-55 to +125			°C
Maximum case temperature			105	°C
Derating	Above 55 °C	2		%/ °C
Cooling	Free Air Convection			
Humidity			95	% RH
Case material	Nickel – coated Copper			
Weight	60			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	>1 500 000 hrs (MIL-HDBK-217 F at +25 °C)			
Maximum soldering temperature	1.5mm from case for 10 sec	260		°C
Transient recovery time		500		uS
Transient recovery deviation	25% load step	±4% of Vout		

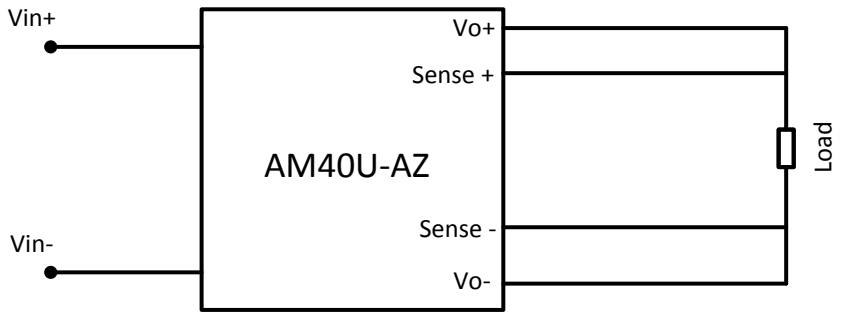
Safety Specifications

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

Pin Out Specifications

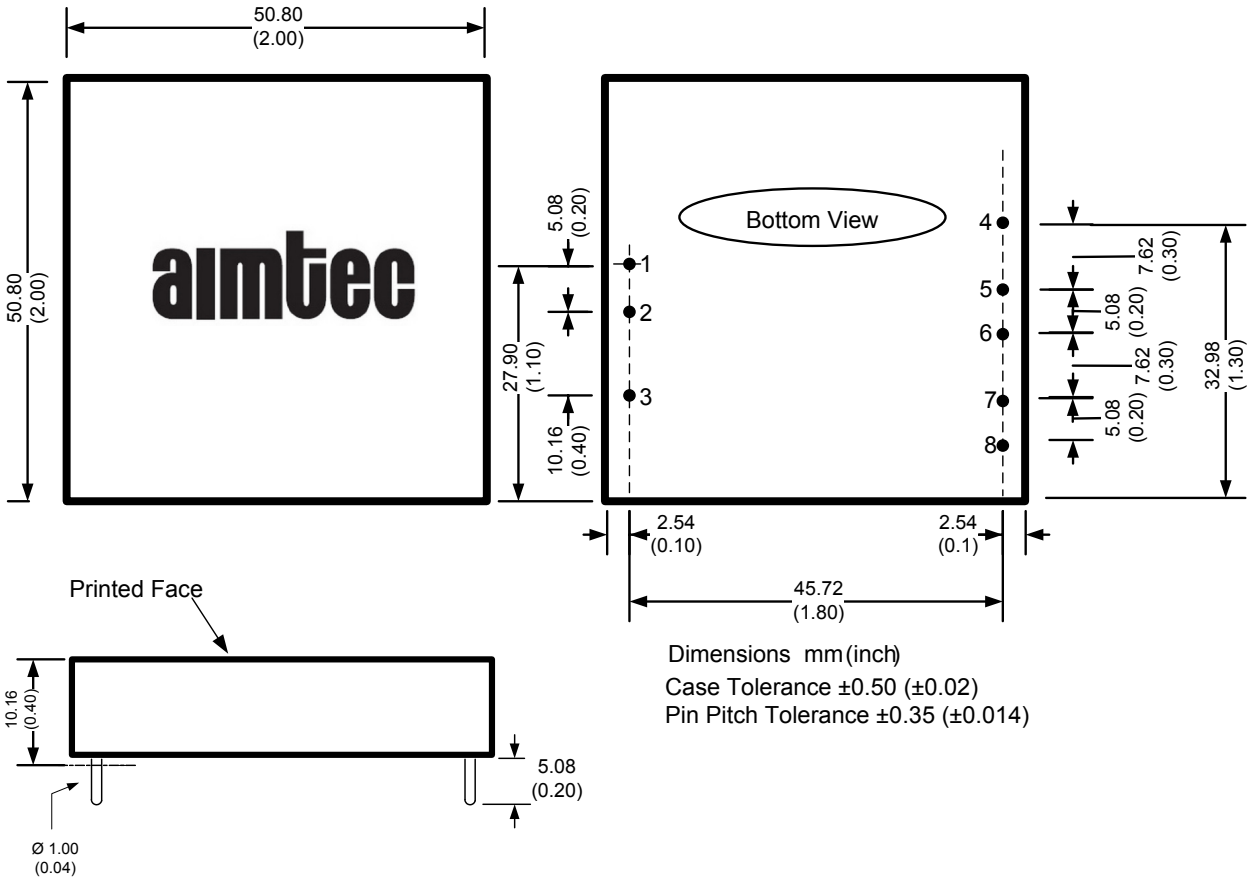
Pin	Single
1	+V Input
2	-V Input
3	On/Off Control
4	-Sense
5	+Sense
6	+V Output
7	-V Output
8	Trim

Recommended Circuit (Sense) Optional



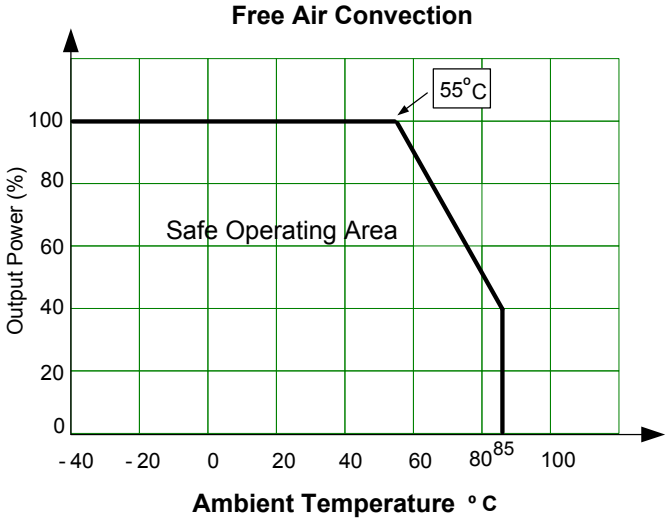
The Sense function: compensates for voltage drop of output due to connections, long leads, traces, or cable widths. Etc.

Dimensions

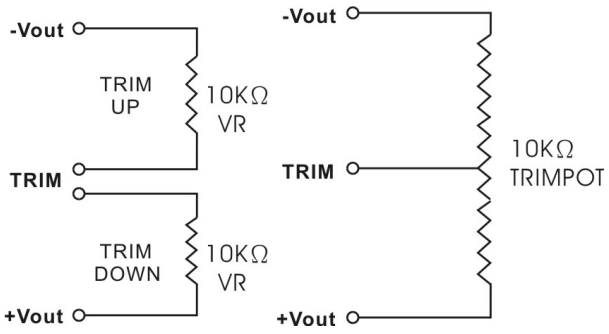


Dimensions mm (inch)
Case Tolerance ±0.50 (±0.02)
Pin Pitch Tolerance ±0.35 (±0.014)

Derating



Trimming



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