

Series AM1PS-JZ

1 Watt | DC-DC Converter

FEATURES:

- Unregulated
- 8 Pin DIP Package
- Low ripple and noise
- High efficiency up to 82%
- Operating temperature -40°C to + 105°C
- Input / Output isolation 3000 VDC
- Pin compatible with multiple manufacturers
- Continuous Short Circuit Protection

Picture Coming Soon



Models

Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max. Capacitive Load (µF)	Efficiency typ. (%)
AM1PS-0505SH30JZ	4.5-5.5	5	200	3000	2400	82
AM1PS-0509SH30JZ	4.5-5.5	9	111	3000	1000	83
AM1PS-0512SH30JZ	4.5-5.5	12	84	3000	560	83
AM1PS-0515SH30JZ	4.5-5.5	15	67	3000	560	83

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	5	4.5-5.5		VDC
Input current (Full load/No load)	5VDC 9VDC, 12VDC 15VDC	244/5 241/12 241/18	257/10 254/20 254/30	mA
Surge Voltage(1sec. max)	5V input		-0.7~9	VDC
Filter			Capacitor	
Reflected ripple current		15		mA

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec, <1mA		3000	VDC
Resistance		> 1000		MOhm
Capacitance		20		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units	
Voltage accuracy	See tolerance graph	±5		%	
Short Circuit protection			Continuous, auto recovery		
Line voltage regulation	Input voltage change: ±1%		1.2	% of Vin	
Load voltage regulation	Load 10 – 100%	5VDC output	10	15	%
		9VDC output	8	10	
		12VDC output	7	10	
		15VDC output	6	10	
Temperature coefficient		±0.02		%/°C	
Ripple & Noise	At 20 MHz Bandwidth	30	75	m Vp-p	

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	270		KHz
Operating temperature	With derating (see graph below)		-40 to +105	°C
Storage temperature			-55 to +125	°C
Maximum case temperature			125	°C
Cooling		Free air convection		
Humidity	Non condensing		95	%
Case material		Plastic UL94-VO		
Lead Soldering Temperature	1.5mm from Lead, 10 sec max.		300	°C
Weight		1.8		g

Dimensions (L x W x H)	0.50 x 0.40 x 0.32 inches	12.70 x 10.16 x 8.20 mm
MTBF	>3500K 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.

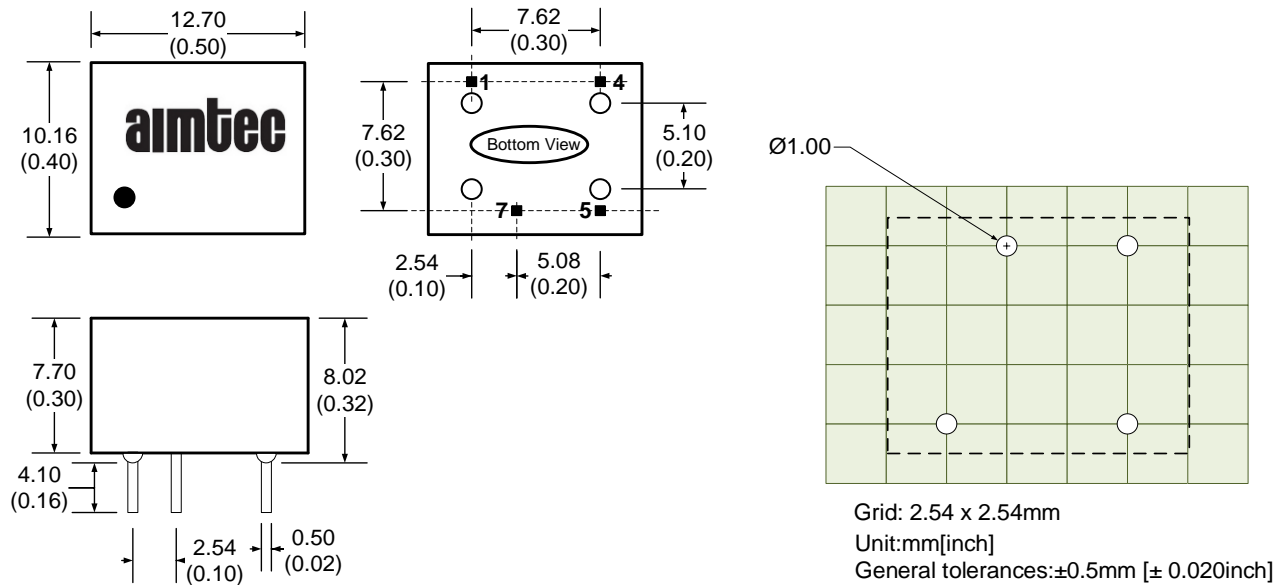
Safety Specifications

Parameters		
Standards	EMI - Conducted and radiated emission	CISPR32 / EN55032, class B (with the recommended EMC circuit)
	Electrostatic Discharge Immunity	IEC 61000-4-2, Air ±8KV, Contact ±4KV, Criteria B

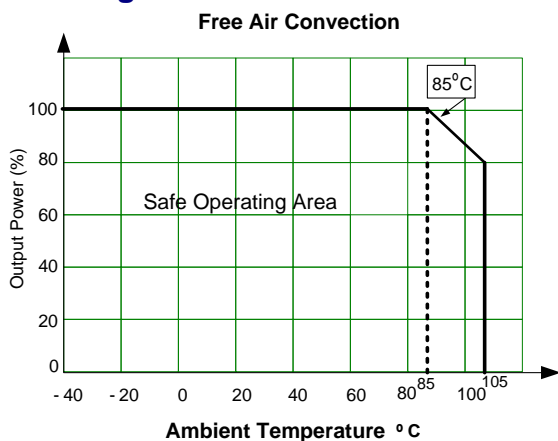
Pin Out Specifications

Pin	Single
1	- V Input
4	+V Input
5	+V Output
6	No pin
7	-V Output
8	No pin

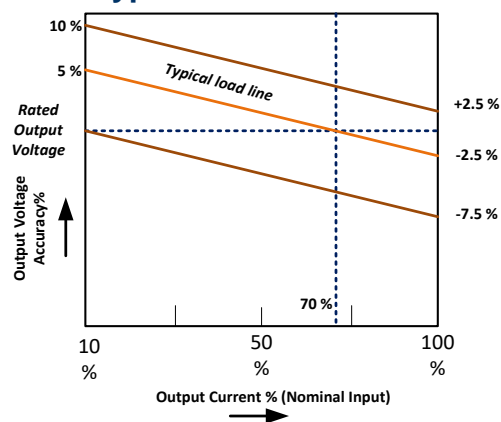
Dimensions & PCB Foot Print



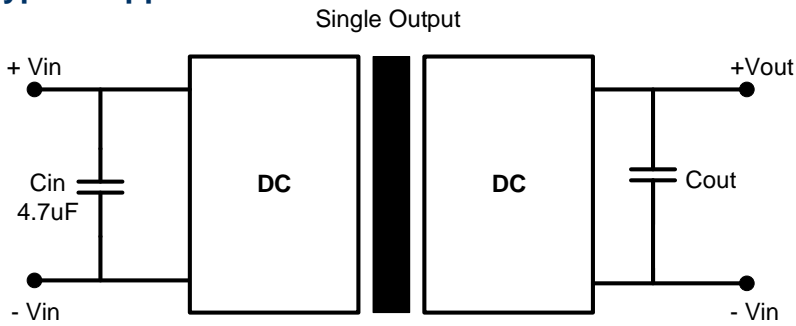
Derating



Typical Characteristics

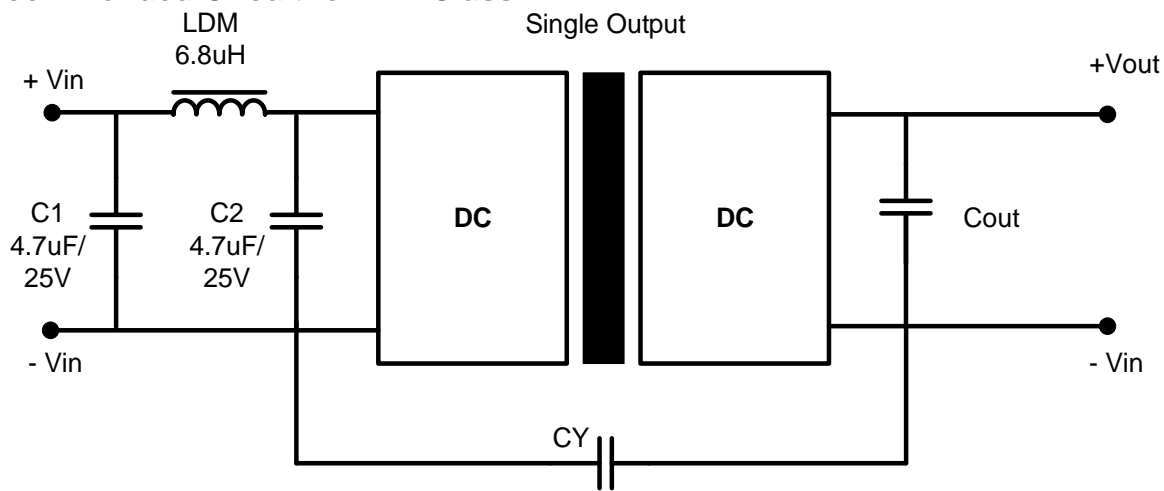


Typical Application Circuit



Model	Cout	CY
5V output	10uF	-
9V output	2.2uF	-
12V output	2.2uF	1nF/4KVDC
15V output	1uF	1nF/4KVDC

Recommended Circuit for EMI Class B



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.