

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-0503SH30JZ**	4.5-5.5	3.3	303	3000	2400	74
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
AM1PS-0524SH30JZ**	4.5-5.5	24	42	3000	220	85

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	5	4.5-5.5		VDC
Input current (Full load/No load)	3.3VDC, 5VDC 9VDC, 12VDC 15VDC, 24VDC	270/5 241/12 241/18	286/10 254/20 254/30	mA
Absolute Maximum Rating (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 typical characteristics	±5		%
Short Circuit protection		Continuous, auto recovery		
Line voltage regulation	Input voltage change: ±1%	3.3VDC output Other models	1.5 1.2	% of Vin
Load voltage regulation	Load 10 – 100%	3.3VDC output 5VDC output 9VDC output 12VDC output 15VDC output 24VDC output	15 10 8 7 6 5	20 15 10 10 10 10
Temperature coefficient		±0.02		%/°C
Ripple & Noise	At 20 MHz Bandwidth	24VDC output Other models	50 30	100 75
				mV p-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			130	°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 0.32inches 12.70 x 10.16 x 8.20mm		
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.

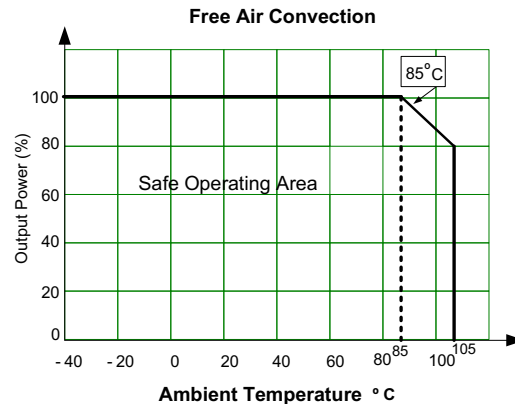
Safety Specifications

Parameters		
Agency approvals	cULus (with exception of the models marked **)	
Standards	IEC/UL 62368-1	
	EMI - Conducted and radiated emission	CISPR32 / EN55032, class B (with the recommended EMC circuit)
	Electrostatic Discharge Immunity	IEC 61000-4-2, Air ±8KV, Contact ±6KV, Criteria B

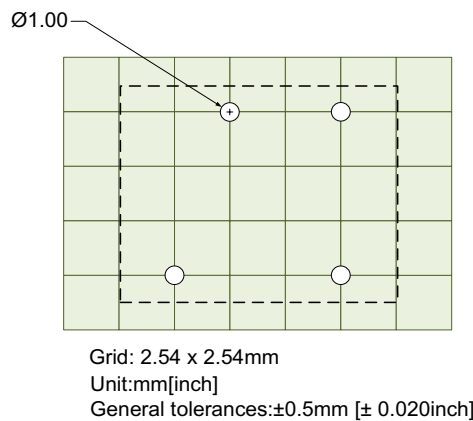
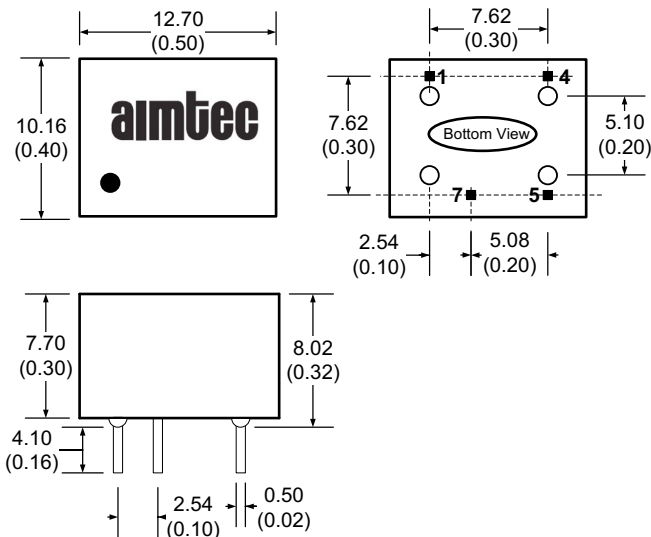
Pin Out Specifications

Pin	Single
1	-V Input
4	+V Input
5	+V Output
7	-V Output

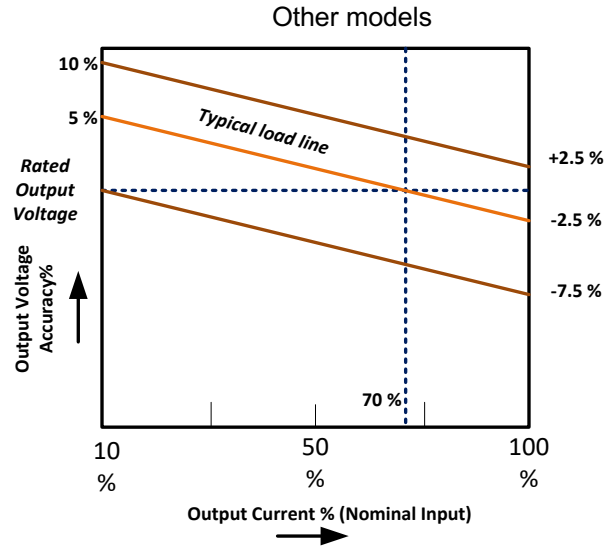
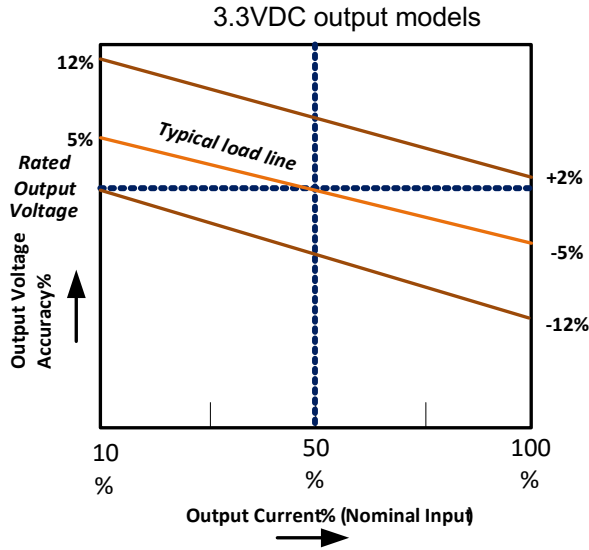
Derating



Dimensions & PCB Footprint

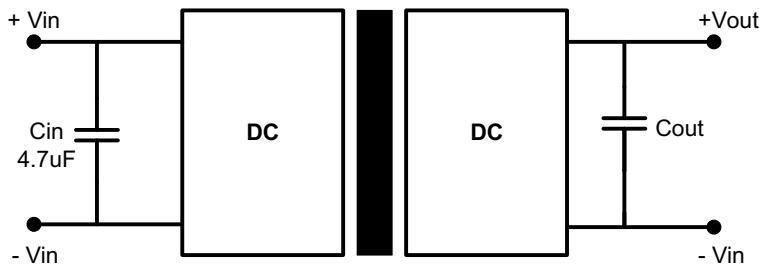


Typical Characteristics



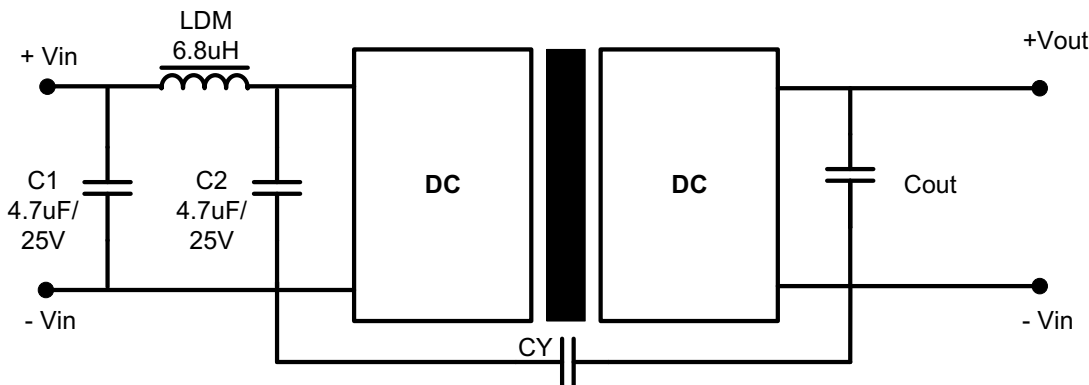
Typical Application Circuit

Single Output



Model	Cout	CY
3.3V output	10uF	100pF/4KVDC
5V output	10uF	100pF/4KVDC
9V output	2.2uF	100pF/4KVDC
12V output	2.2uF	1nF/4KVDC
15V output	1uF	1nF/4KVDC
24V 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 the ones listed in this datasheet. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.