AM1LE-JZ

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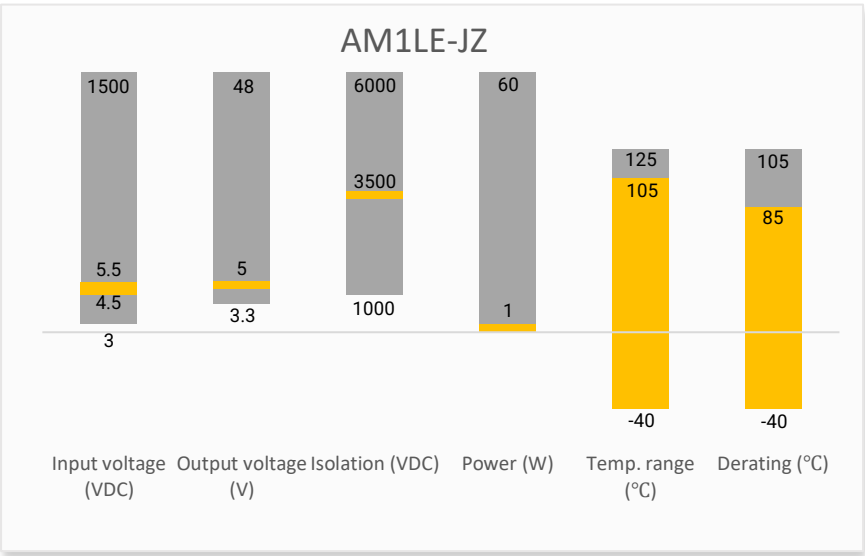
SMD

The new AM1LE-JZ is a brand-new DC/DC converter that offers much greater cost effectiveness due to material normalization and production automation also leading to improved reliability and performance. Offering a commercial input voltage range of 5VDC and an output voltage of commonly used 5VDC, this series will offer many benefits to your new system design.
This new series offers great operating temperatures, from -40°C to 105°C with full power up to 85°C. It also features high isolation of 3500VDC for improved reliability and system safety. Furthermore, a higher MTBF of 3500,000h, output short circuit protection (OSCP) come standard with the series.
The AM1LE-JZ is perfect for information technology, instrumentation, communication and civil applications.

Features

- Operating Temp: -40 °C to +105 °C
- High isolation voltage: 3500VDC
- Low ripple & noise, 70mV (p-p), max.
- Unregulated Output
- SMD type package

Summary



Training

Product Training Video (click to open)

Press Release

Coming Soon!

Application Notes

Applications

Power Grid | Industrial | Telecom | Instrumentation

Models & Specifications

Single Output							
Model	Input Voltage (VDC)	Output Voltage (VDC)	Input Current Max (mA)		Output Current Max (mA)	Maximum Capacitive Load (µF)	Efficiency (%) Full Load Typ.
			No Load	Full Load			
AM1LE-0505SH35JZ	5 (4.5-5.5)	5	10	257	200	2200	82

Input Specification				
Parameters	Conditions	Typical	Maximum	Units
Voltage range	5	4.5 – 5.5		VDC
Filter	Capacitance Filter			
Input reflected ripple current		15		mA pk-pk
Absolute maximum rating	1s		9	VDC

Isolation Specification				
Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec, ≤ 1mA	3500		VDC
Resistance	500VDC	≥1000		MΩ
Capacitance	100kHz/ 0.1V	20		pF

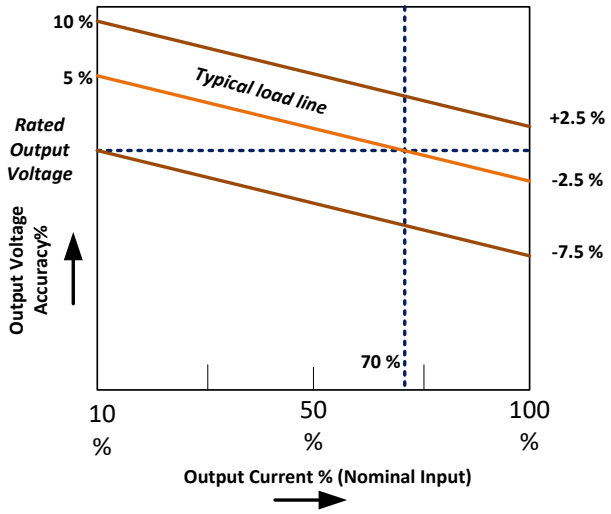
Output Specification				
Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	Nominal load (See tolerance graph)	± 2.5		%
Line regulation	Per 1% of Vin Change		1.2	%
Load regulation	10 ~ 100% load	10	15	%
Short circuit protection	Continues, Auto recovery			
Ripple & Noise*	20MHz bandwidth	30	70	mV pk-pk

General Specifications				
Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% Load, nominal input	270		KHz
Operating temperature	With derating	-40 to +105		°C
Storage temperature		-55 to +125		°C
Maximum case temperature			120	°C
Reflow temperature	Over 217°C for less than 60sec		245	°C
Reflow soldering process	IPC/JEDEC J-STD-020D.1			
Temperature coefficient	100% Load	± 0.02		%/ °C
Cooling	Free air convection			
Humidity	Non-condensing		95	% RH
Moisture sensitivity level (MSL)	IPC/JEDEC J-STD-020D.1	Level 1		
Base material	Black Plastic (UL94V-0)			
Weight		1.4		g

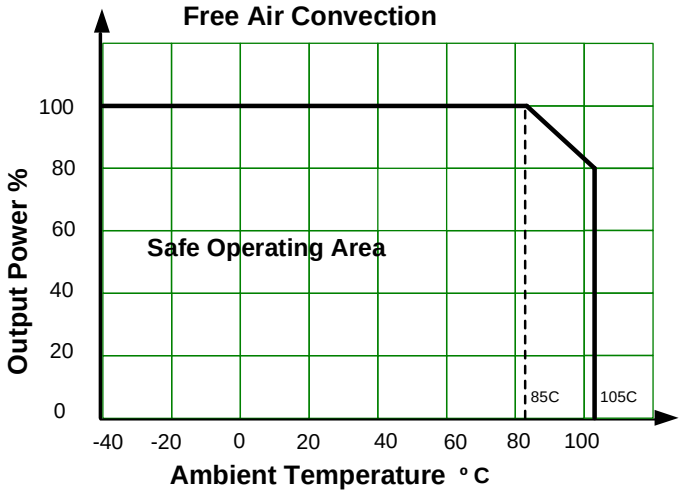
Dimensions (L x W x H)	0.50 x 0.45 x 0.28 inches (13.20 x 11.40 x 7.25 mm)
Vibration	10 – 1000Hz, 10G, 1mm 4cycles along all axels
MTBF	> 3 500 000 hrs (MIL-HDBK -217F, t=+25°C)
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.	

Safety Specifications		
Parameters		
Standards	Design to meet EN62368	
	EMI - Conducted and radiated emission	EN55025 Class I (see EMC recommended circuit)
	Electrostatic Discharge Immunity	ISO10605 Contact ±6KV Air±8KV Perf. Criteria B

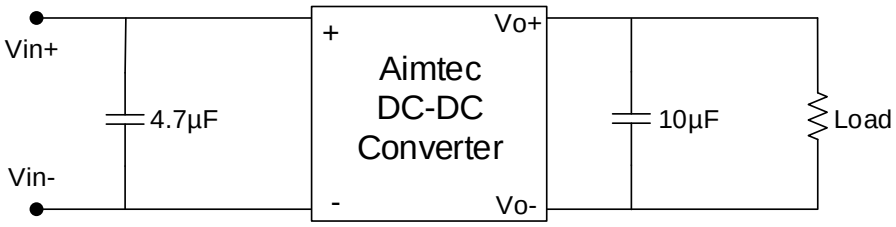
Load Accuracy Tolerance Graph



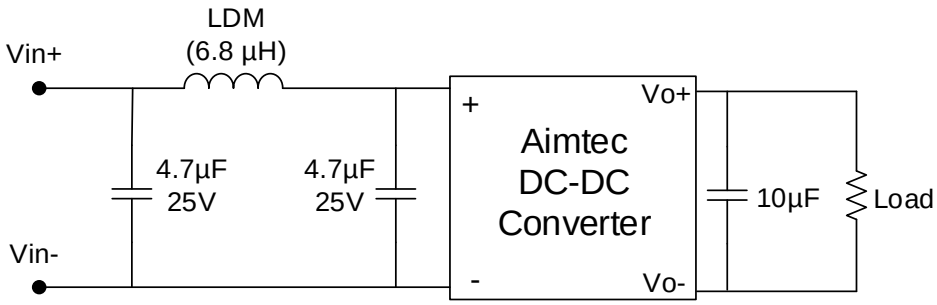
Derating



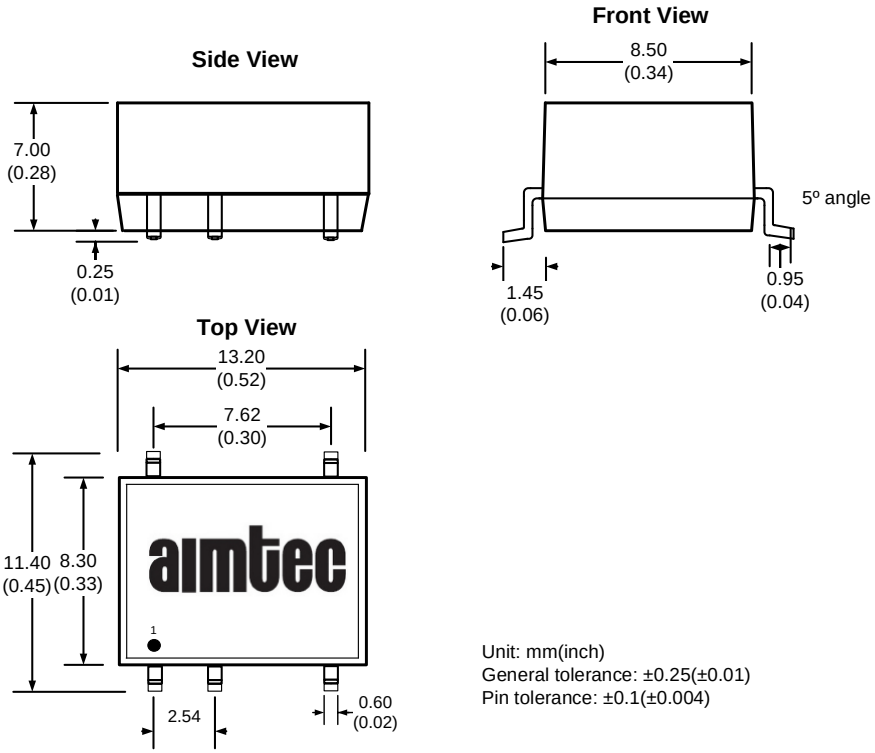
Typical Application Circuit



EMI Application Circuit



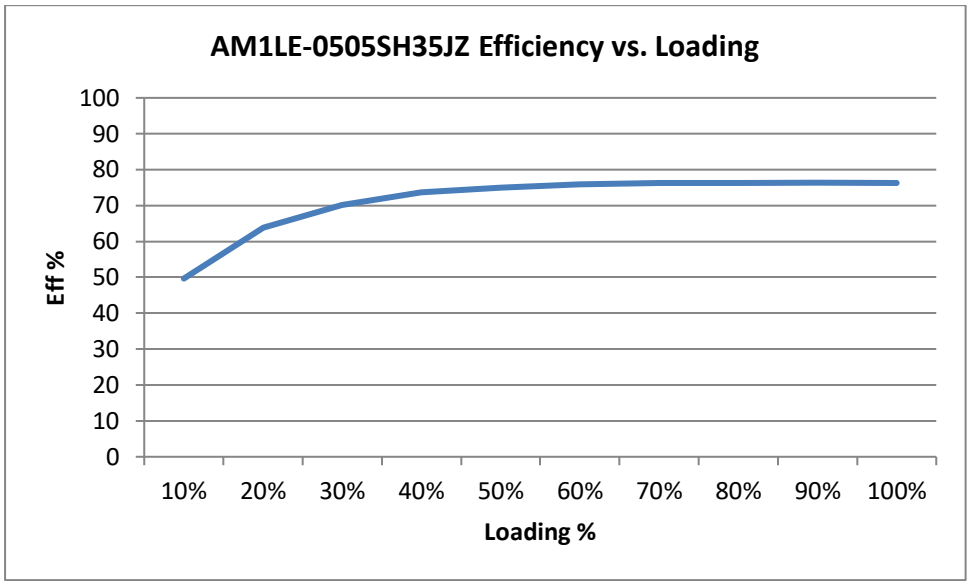
Dimensions



Unit: mm(inch)
General tolerance: ±0.25(±0.01)
Pin tolerance: ±0.1(±0.004)

Pin Out Specifications	
Pin	Single
1	-V Input
2	+V Input
3	No Pin
4	-V Output
5	+V Output
6	No Pin
7	No Pin
8	N.C

Efficiency vs. Loading



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