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AM1LS-XZ



The new AM1LS-XZ 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 5V, 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 an isolation of 1500VDC for improved reliability and system safety. Furthermore, a higher MTBF of 3500,000h, output short circuit protection (OSCP) come standard with the series.

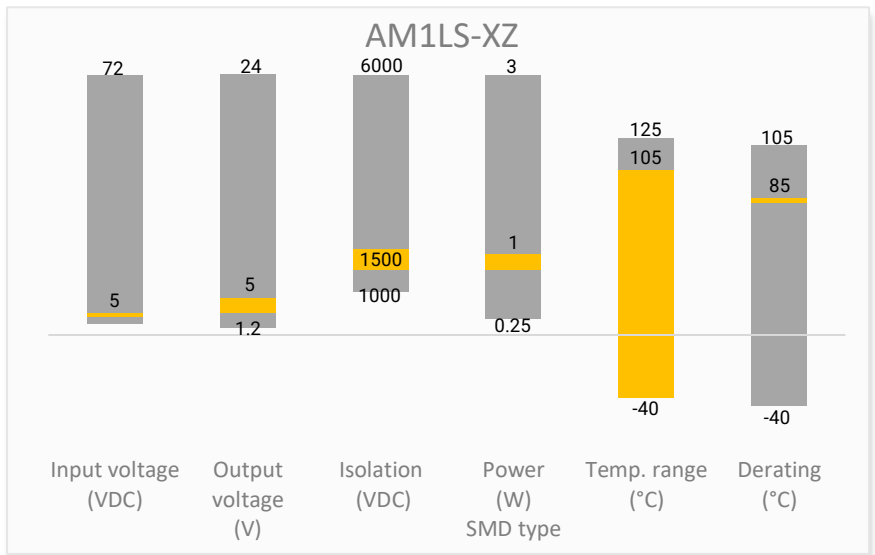
The AM1LS-XZ is perfect for information technology, instrumentation, communication and civil applications.

Features



- No load input current as low as 5mA
- Operating Temp: -40 °C to +105 °C
- High I/O isolation voltage : 1500 VDC
- Output short circuit protection
- High efficiency up to 82%
- SMD type package, Industry standard pin-out

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)	Isolation (VDC)	Maximum Capacitive Load (μF)	Efficiency (%) Full Load Typ.
			No Load	Full Load				
AM1LS-0505SXZ	5 (4.5 ~ 5.5)	5	10	286	200	1500	2400	82

Input Specification

Parameters	Conditions	Typical	Maximum	Units
Voltage range		4.5 – 5.5		VDC
Filter	Capacitor			
Absolute maximum rating	1 sec, max	-0.7 ~ 9		VDC
Input reflected ripple current		15		mA

Output Specification

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	See Typical Characteristic			
Line regulation	Input voltage change : 1%		1.2	%
Load regulation	10 ~ 100% load	10	15	%
Short circuit protection	Continuous, auto-recovery			
Temperature coefficient	Full load	±0.02		%/°C
Ripple & Noise	20MHz bandwidth	30	75	mV pk-pk

Note: Please refer to application notes for Ripple & Noise test information.

Isolation Specification

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec, 1mA max	1500		VDC
Resistance	Input to output resistance at 500Vdc	>1000		MOhm
Capacitance	Input to output, 100KHz/0.1V	20		pF

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	Full load, nominal input voltage	270		KHz
Operating temperature	See derating graph	-40 to +100		°C
Storage temperature		-55 to +125		°C
Case temperature rise	Ta = 25°C	15		°C
Maximum case temperature			120	°C
Reflow Temperature	Maximum duration ≤60s over 217°C		245	°C
Lead-free reflow solder process	IPC/JEDEC J-STD-020D.1			
Cooling	Free air convection			
Humidity	Non-condensing		95	% RH
Case material	Heat resistant black Plastic (flammability to UL 94V-0)			
Weight		1.4		g
Dimensions (L x W x H)	0.5 x 0.44 x 0.25 inches, 12.70 x 11.20 x 6.25mm			
MTBF	> 3 500 000 hrs (MIL-HDBK -217F, t=+25°C) / Full Load			
Moisture sensitivity level (MSL)	IPC/JEDEC J-STD-020D.1	Level 1		

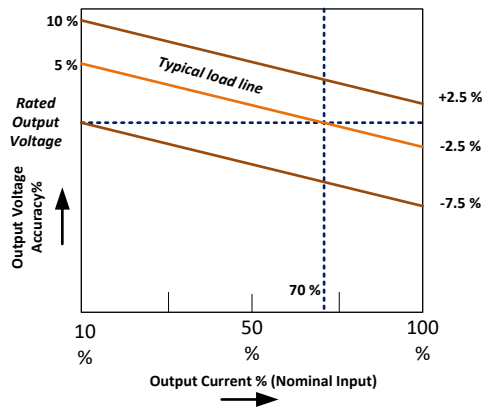
All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

Safety Specifications

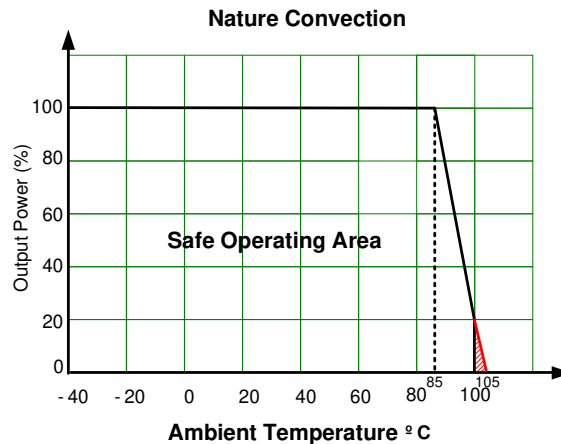
Parameters

Agency approvals	UL 62368-1	
Standards	EMC - Conducted and radiated emission	CISPR32/EN55032, Class B with recommended circuit
	Electrostatic Discharge Immunity	IEC 61000-4-2 Air ± 8 KV, Contact ± 4 KV, Criteria B

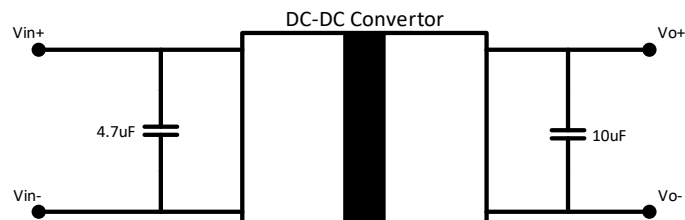
Typical Characteristic



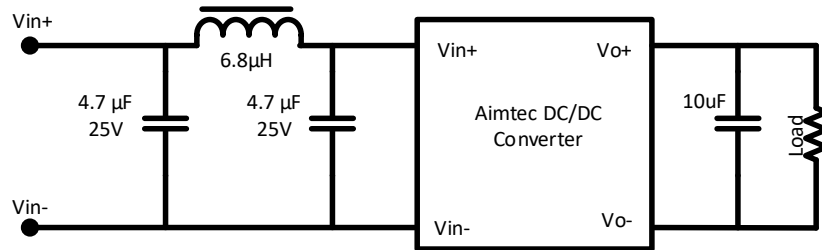
Derating



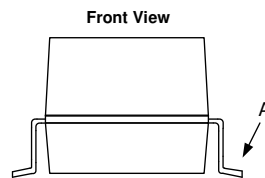
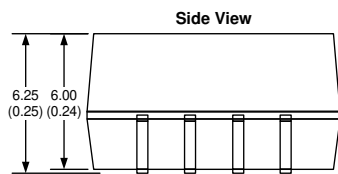
Typical Application Circuit



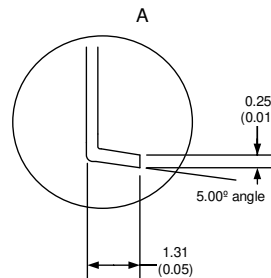
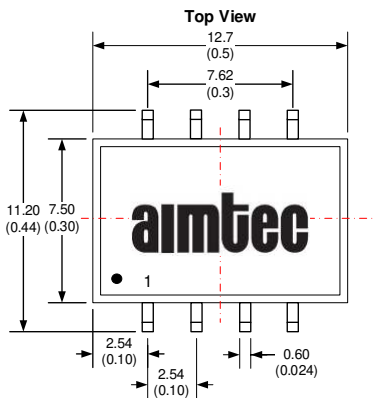
EMI Recommended Circuit



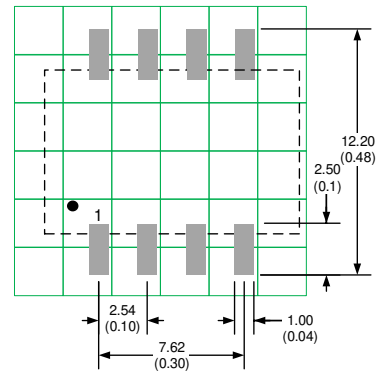
Dimensions



Pin Out Specifications	
Pin	Single
1	-V Input
2	+V Input
4	-V Output
5	+V Output
Other Pins	NC
NC: Pin to be isolated from circuitry	



Notes:
All dimensions are typical in millimeters (inches).
Pin section tolerances : ± 0.10 (± 0.004)
General tolerances : ± 0.25 (± 0.01)



Note: Grid 2.54*2.54mm

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