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AM3LV-EZ



SMD Package

The AM3LV-EZ is a 3W SMD DC/DC converter that offers great cost savings thanks to an improved manufacturing process. It also features excellent reliability and performance while offering a standard input voltage range of 5-48VDC as well as an output voltage of 3.3-15V. This compact SMD design will surely benefit your new system design.

This new series offers great operating temperatures, from -40 to 85°C with full power up to 70°C. Also, an isolation of 1500VDC for improved reliability and system safety as well as a great 1,000,000h MTBF come standard.

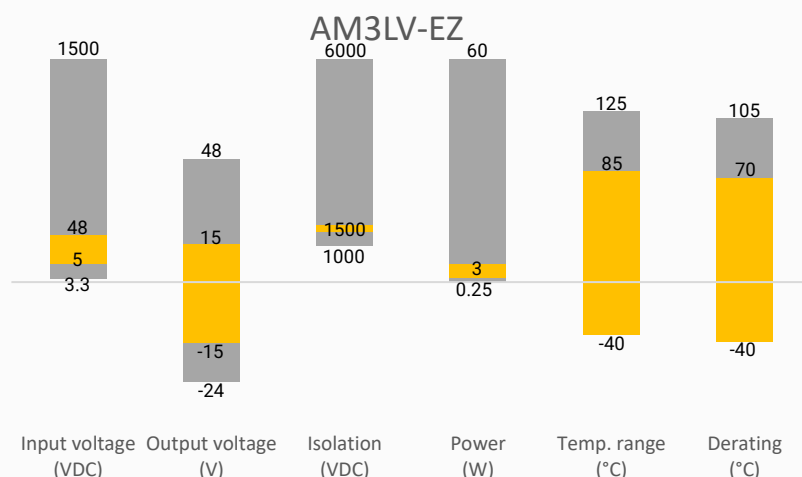
The AM3LV-EZ is suitable for instrumentation, industrial control, industrial applications, communication and IoT applications.

Features

- High I/O Isolation 1500VDC
- Continuous Short circuit protection
- Operating Temp: -40 °C to +85 °C
- Compact footprint and high-power Density
- Efficiency up to 87%
- Unregulated output
- Made in Taiwan



Summary



Training



Product Training Video
(click to open)



Press Release

Coming Soon!

Application Notes

Applications



IoT



Industrial



Telecom



Portable Equipment

Models & Specifications

Single Output

Model	Input Voltage (VDC)	Output Voltage (VDC)	Output Current max (mA)	Isolation (VDC)	Efficiency Typ. (%)
AM3LV-0503SEZ	5 (4.5-9)	3.3	700	1500	70
AM3LV-0505SEZ	5 (4.5-9)	5	600	1500	75
AM3LV-0512SEZ	5 (4.5-9)	12	250	1500	77
AM3LV-0515SEZ	5 (4.5-9)	15	200	1500	75
AM3LV-1203SEZ	12 (9-18)	3.3	700	1500	75
AM3LV-1205SEZ	12 (9-18)	5	600	1500	79
AM3LV-1212SEZ	12 (9-18)	12	250	1500	82
AM3LV-1215SEZ	12 (9-18)	15	200	1500	82
AM3LV-2403SEZ	24 (18-36)	3.3	700	1500	75
AM3LV-2405SEZ	24 (18-36)	5	600	1500	80
AM3LV-2412SEZ	24 (18-36)	12	250	1500	86
AM3LV-2415SEZ	24 (18-36)	15	200	1500	87
AM3LV-4803SEZ	48 (36-75)	3.3	700	1500	73
AM3LV-4805SEZ	48 (36-75)	5	600	1500	78
AM3LV-4812SEZ	48 (36-75)	12	250	1500	83
AM3LV-4815SEZ	48 (36-75)	15	200	1500	83

Note: Use suffix "TR" for tape & reel packing (ex. AM3LV-2403SEZTR).

Dual Output

Model	Input Voltage (VDC)	Output Voltage (VDC)	Output Current max (mA)	Isolation (VDC)	Efficiency Typ. (%)
AM3LV-0505DEZ	5 (4.5-9)	±5	±300	1500	72
AM3LV-0512DEZ	5 (4.5-9)	±12	±125	1500	74
AM3LV-0515DEZ	5 (4.5-9)	±15	±100	1500	75
AM3LV-1205DEZ	12 (9-18)	±5	±300	1500	72
AM3LV-1212DEZ	12 (9-18)	±12	±125	1500	82
AM3LV-1215DEZ	12 (9-18)	±15	±100	1500	80
AM3LV-2405DEZ	24 (18-36)	±5	±300	1500	78
AM3LV-2412DEZ	24 (18-36)	±12	±125	1500	82
AM3LV-2415DEZ	24 (18-36)	±15	±100	1500	84
AM3LV-4805DEZ	48 (36-75)	±5	±300	1500	78
AM3LV-4812DEZ	48 (36-75)	±12	±125	1500	81
AM3LV-4815DEZ	48 (36-75)	±15	±100	1500	82

Note: Use suffix "TR" for tape & reel packing (ex. AM3LV-2403DEZTR).

Input Specification

Parameters	Conditions	Typical	Maximum	Units
Voltage Types	Vo, Io Nom		2:1	
Filter	Capacitor			

Isolation Specification

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec, leakage $\leq 0.5\text{mA}$	>1500	--	VDC
Resistance	500VDC	>1000	--	MΩ

Output Specification

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	100% load, AM3LV-2403SEZ	--	± 3	%
	100% load, others	--	± 2	%
Line regulation	LL to HL, Full load	--	± 0.5	%
Load regulation	0-100% load, AM3LV-2403SEZ	--	± 1	%
	0-100% load, others	--	± 0.8	%
Transient Response Setting Time	50% load step change	350		μs
Ripple & Noise	20MHz Bandwidth	--	100	mV pk-pk

General Specifications

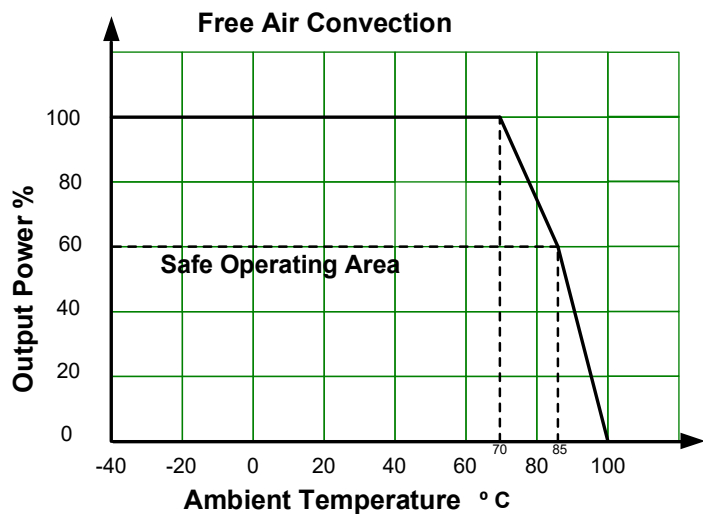
Parameters	Conditions	Typical	Maximum	Units
Switching frequency	AM3LV-2403SEZ	200	--	KHz
	others	100	--	KHz
Short circuit protection	Continuous			
Operating temperature	With derating at 70°C	-40 to +85	--	°C
Storage temperature	--	-55 to +125	--	°C
Cooling	Free air convection			
Humidity	Non-condensing		95	% RH
Case material	Black plastic (flammability to UL 94V-0)			
Weight		3.9	--	g
Dimensions		0.95 x 0.56 x 0.40 inches (24.10 x 14.35 x 10.25 mm)		
MTBF	1 000 000 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.

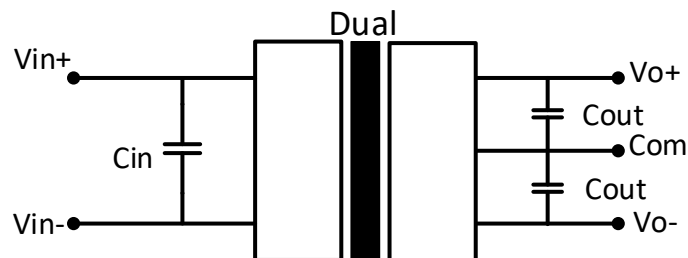
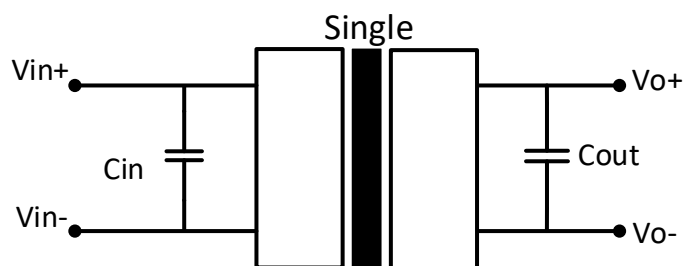
Safety Specifications

Parameters		
Standards	Information technology Equipment	Designed to meet IEC62368, UL62368, EN62368

Derating



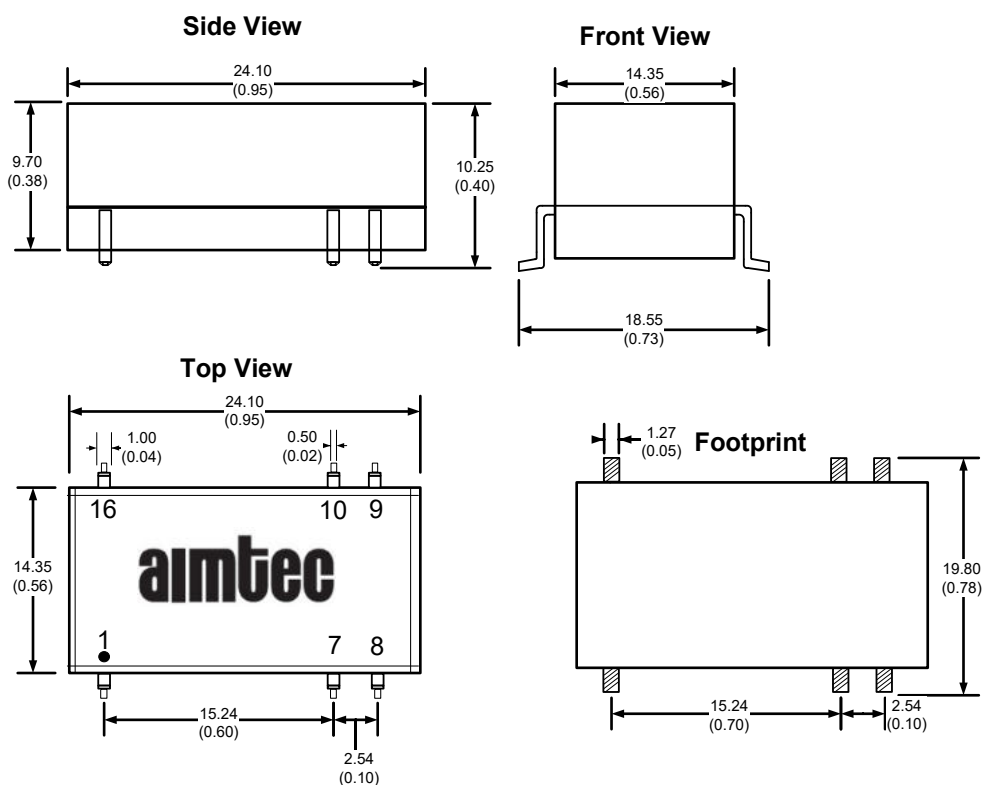
Typical application circuit



Single Output			
Vin	Cin	Vout	Cout
5V	10μF/25V	3.3V	100μF/25V
12V	10μF/50V	5V	100μF/25V
24V	10μF/100V	12V	100μF/25V
48V	10μF/100V	15V	100μF/50V

Dual Output			
Vin	Cin	Vout	Cout
5V	10μF/25V	±5V	100μF/25V
12V	10μF/50V	±12V	100μF/25V
24V	10μF/100V	±15V	100μF/50V
48V	10μF/100V		

Dimensions



Pin Out Specifications		
Pin	Single	Dual
1	-V Input	-V Input
7	NC	NC
8	NC	Com
9	+V Output	+V Output
10	-V Output	-V Output
16	+V Input	+V Input

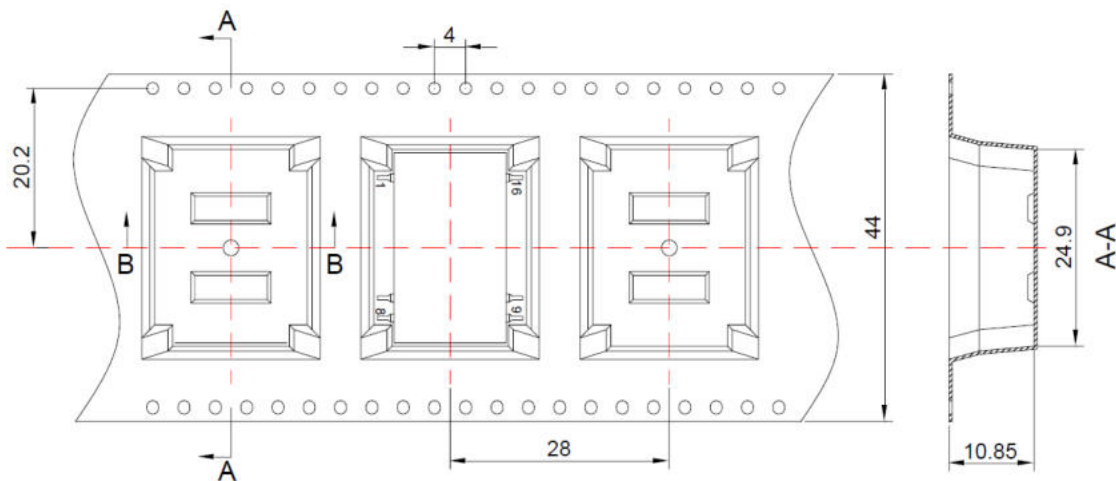
All dimensions are in millimeters (inches)
Pin Tolerance: ± 0.05 (± 0.002)
Case Tolerance: ± 0.25 (± 0.01)

Packing Information

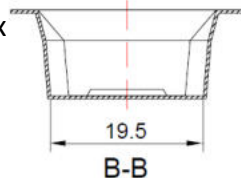


Mechanicals

1. Weight --- 3.9grams/pcs
2. Tape & Reel --- 200pcs
3. Outer carton unit: 1200pcs/box
4. Outer carton unit: 6T&R/box
5. Weight: 7.8kg per carton
6. Outer carton dimensions: 365 x 365 x 350mm

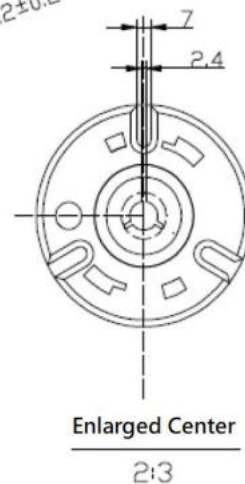
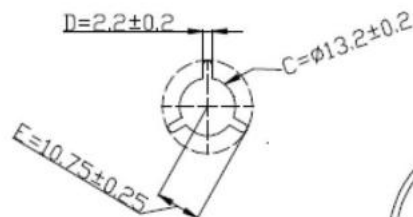
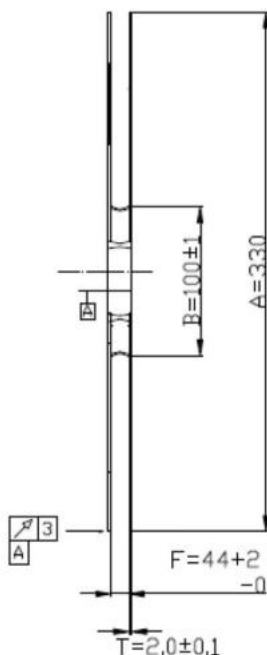
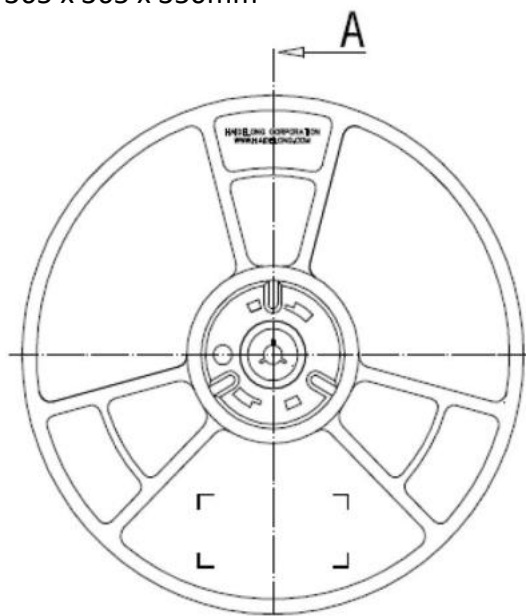


Tape & Reel



B-B

All dimensions are in millimeters



Enlarged Center

2:3

All dimensions are in millimeters

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