aimtec
Your Power Partner

Series AM1/4L-NZ
1/4 Watt | DC-DC Converter

FEATURES:

- RoHS Compliant
- SMD Package
- Low ripple and noise
- High efficiency up to 68%
- Operating temperature -40ºC to + 85ºC
- Input/Output Isolation 1000 and 3000VDC
- Pin compatible with multiple manufacturers
- UL94-VO Package

RoHS

Models
Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Efficiency (%)
AM1/4L-1205S-NZ	10.8-13.2	5	50	1000	65
AM1/4L-0505SH30-NZ	4.5-5.5	5	50	3000	64
AM1/4L-1205SH30-NZ *	10.8-13.2	5	50	3000	66
AM1/4L-1212SH30-NZ	10.8-13.2	12	20	3000	67

Models
Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Efficiency (%)
AM1/4L-0505DH30-NZ **	4.5-5.5	±5	±25	3000	64

NOTE: Add suffix “TR” to a part number when ordering in tape and reel package.

* For new designs, please see new generation model AM1/4LS-1205SH30-NZ; model AM1/4L-1205SH30-NZ will be discontinued by December 31st, 2017 (EOL date).
** For new designs, please see new generation model AM1LS-0505DH30-NZ; model AM1/4L-0505DH30-NZ will be discontinued by December 31st, 2017 (EOL date).

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	5	4.5-5.5		VDC
	12	10.8-13.2		
Filter	Capacitor			

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		1000 & 3000	VDC
Resistance		> 1000		MOhm
Capacitance		60		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	See the tolerance graph	±5		%
Voltage balance	Dual Output	±2		%
Line voltage regulation	For 1% change of Vin	±1.2		%
Load voltage regulation	Load 10 – 100%	10		%
Temperature coefficient		±0.03		%/ºC
Ripple & Noise	At 20MHz Bandwidth	75		mV p-p

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load single	100		KHz
	100% load dual	150		KHz
Short circuit protection	Momentary (1sec)			
Operating temperature	Without derating	-40 to +85		ºC

Storage temperature		-55 to +125		°C
Cooling	Free air convection			
Humidity			95	%
Case material	Plastic UL94-VO			
Weight		1.5		g
Dimensions (L x W x H)	Single 1000VDC	0.50 x 0.44 x 0.26 inch	12.70 x 11.20 x 6.70 mm	
	Single and Dual 3000 VDC	0.60 x 0.44 x 0.26 inch	15.24 x 11.20 x 6.70 mm	
MTBF	>3 500 000hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			
Max Case Temperature			95	°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

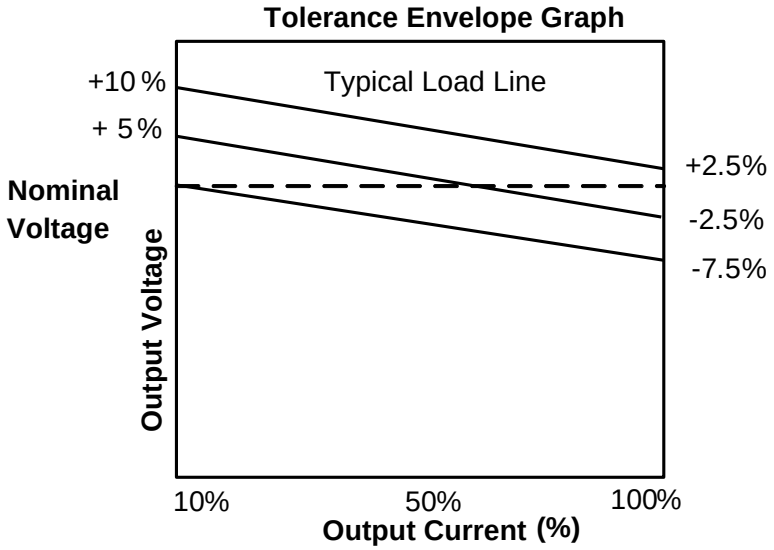
Pin Out Specifications
Single 1000VDC

Pin	Single
1	- V Input
2	+ V Input
3	N.C.
4	- V Output
5	+ V Output
6	N.C.
7	N.C.
8	N.C.

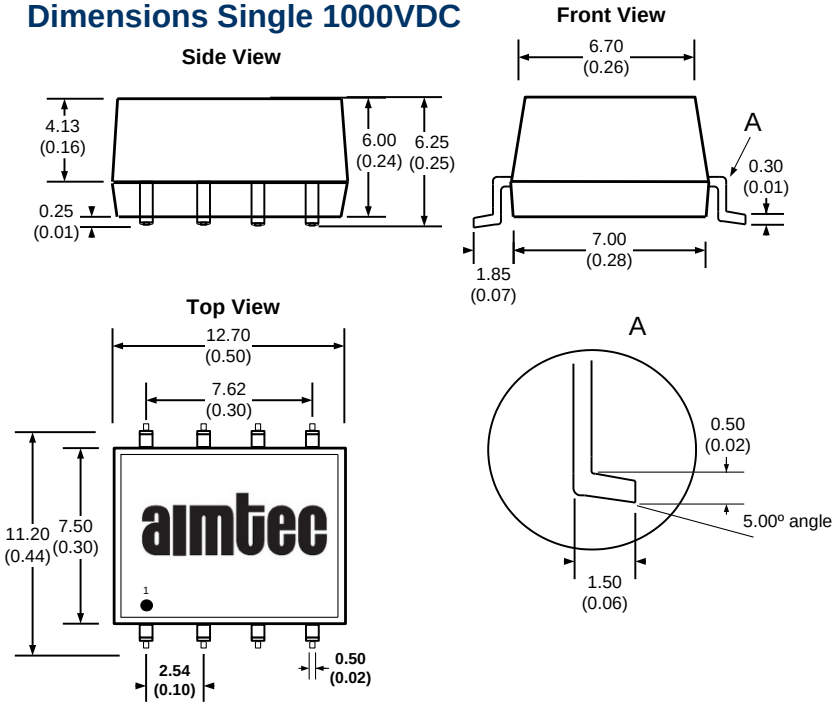
Pin Out Specifications
Single and Dual 3000VDC

Pin	Single	Dual
1	- V Input	- V Input
2	+ V Input	+ V Input
3	N.C.	N.C.
5	-V Output	Common
6	N.C.	-V Output
7	N.C.	N.C.
8	+V Output	+V Output
10	N.C.	N.C.
11	N.C.	N.C.
12	N.C.	N.C.

Typical characteristics

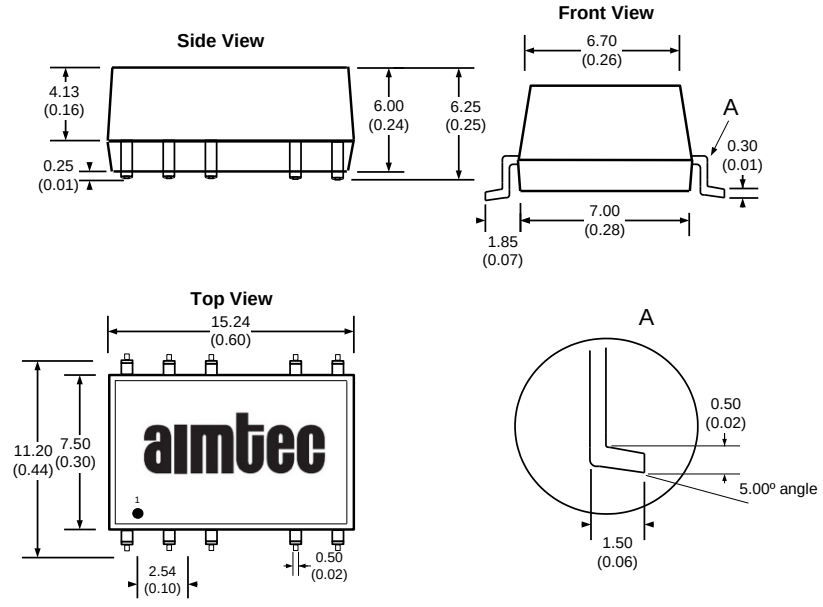


Dimensions Single 1000VDC



All dimensions are in mm (inch)
All Pins are on a 2.54mm (0.10inch) pitch
with tolerance of ±0.25mm (0.01inch)

Dimensions single and dual 3000VDC



All dimensions are in mm (inch)
All Pins are on a 2.54mm (0.10inch) pitch
with tolerance of ±0.25mm (0.01inch)

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