



### FEATURES:

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



### Models Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Efficiency (%)
AM1/4L-0505S-NZ	4.5-5.5	5	50	1000	64
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-2405D-NZ	21.6-26.4	±5	±25	1000	62
AM1/4L-0505DH30-NZ	4.5-5.5	±5	±25	3000	64

\* Not recommended for new design

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

### Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	5	4.5-5.5		VDC
	12	10.8-13.2		
	24	21.6-26.4		
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 (Single)	For 1% change of Vin	±1.2		%
Line voltage regulation (Dual)	For 1% change of Vin	±1.2		%
Load voltage regulation (Single)	Load 10 – 100%	10		%
Load voltage regulation (Dual)	Load 10 – 100%	10		%
Temperature coefficient		±0.03		%/°C
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		°C
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	
	Dual 1000VDC	0.60 x 0.44 x 0.26 inch	15.24 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

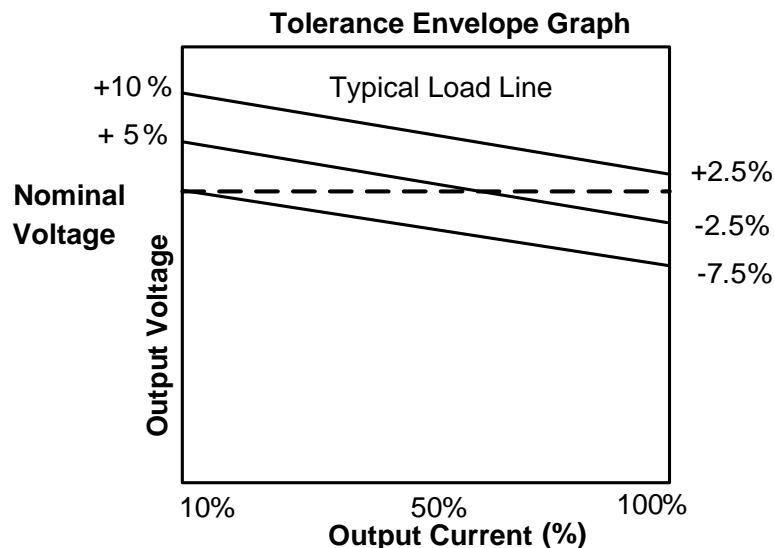
### Pin Out Specifications Single and Dual 1000VDC

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

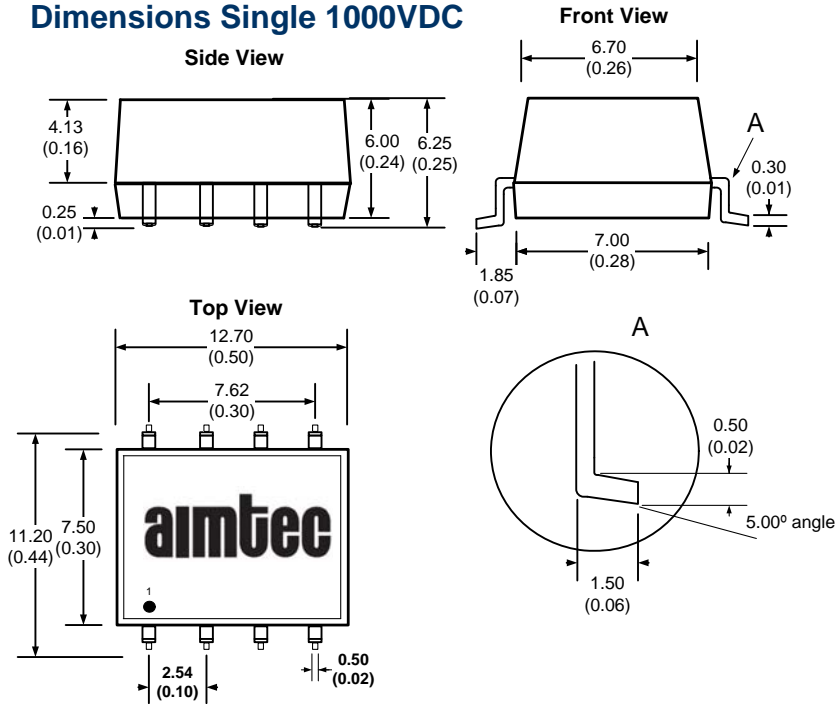
### Pin Out Specifications Single and Dual 3000VDC

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

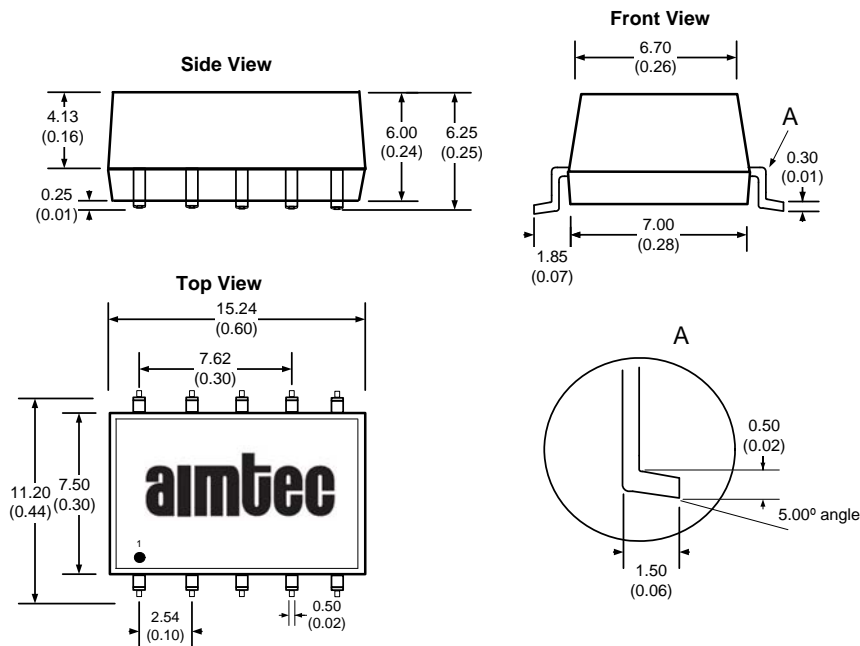


**Dimensions Single 1000VDC**



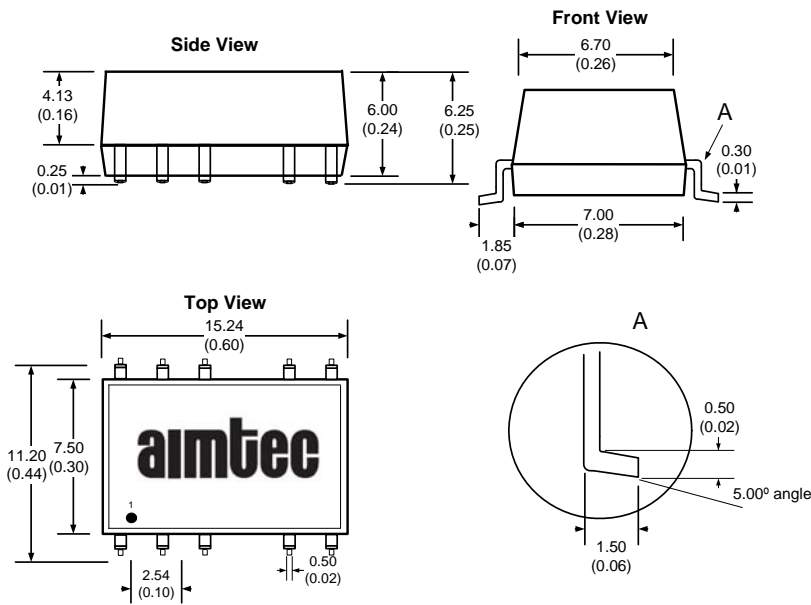
All dimensions are in mm (inch)  
All Pins are on a 2.54mm (0.10inch) pitch  
with tolerance of  $\pm 0.25\text{mm}$  (0.01inch)

**Dimensions Dual 1000VDC**



All dimensions are in mm (inch)  
All Pins are on a 2.54mm (0.10inch) pitch  
with tolerance of  $\pm 0.25\text{mm}$  (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)

**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](http://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 than the ones listed in this datasheet. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at [www.aimtec.com](http://www.aimtec.com).