

FEATURES:

- SMD Package
- Single Output Models
- Low Ripple and Noise
- High efficiency up to 81%
- Operating temperature -40°C to + 85°C
- Input / Output Isolation 1000 VDC
- Pin compatible with multiple manufacturers
- RoHS compliant



Models

Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Efficiency (%)
AM2LP-0505S-NZ	4.5-5.5	5	400	1000	78
AM2LP-0512S-NZ	4.5-5.5	12	167	1000	79
AM2LP-0515S-NZ	4.5-5.5	15	133	1000	80
AM2LP-1205S-NZ	10.8-13.2	5	400	1000	78
AM2LP-1212S-NZ	10.8-13.2	12	167	1000	80
AM2LP-1215S-NZ	10.8-13.2	15	133	1000	81
AM2LP-2405S-NZ	21.6-26.4	5	400	1000	78
AM2LP-2412S-NZ	21.6-26.4	12	167	1000	80
AM2LP-2415S-NZ	21.6-26.4	15	133	1000	81
AM2LP-2424S-NZ	21.6-26.4	24	84	1000	80

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.

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	VDC
Resistance	500Vdc	>1000		MOhm

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	See the tolerance graph	±5		%
Short Circuit protection	Momentary (1sec)			
Line voltage regulation	For 1.0% of Vin	1.2		% of Vin
Load voltage regulation	Load 10 – 100%	10		%
Temperature coefficient		±0.03		%/°C
Ripple & Noise	20MHz Bandwidth	150		mV p-p
Minimum Load Current		10		% of Max

If the operating output current is less than 10% of maximum it is recommended to install a load resistor in parallel with the load to ensure the actual load current meets the minimum load current requirement.

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	500		KHz
Operating temperature	Without derating	-40 to +85		°C
Storage temperature		-55 to +125		°C
Maximum case temperature			+95	°C
Cooling	Free air convection			

General Specifications (continued)

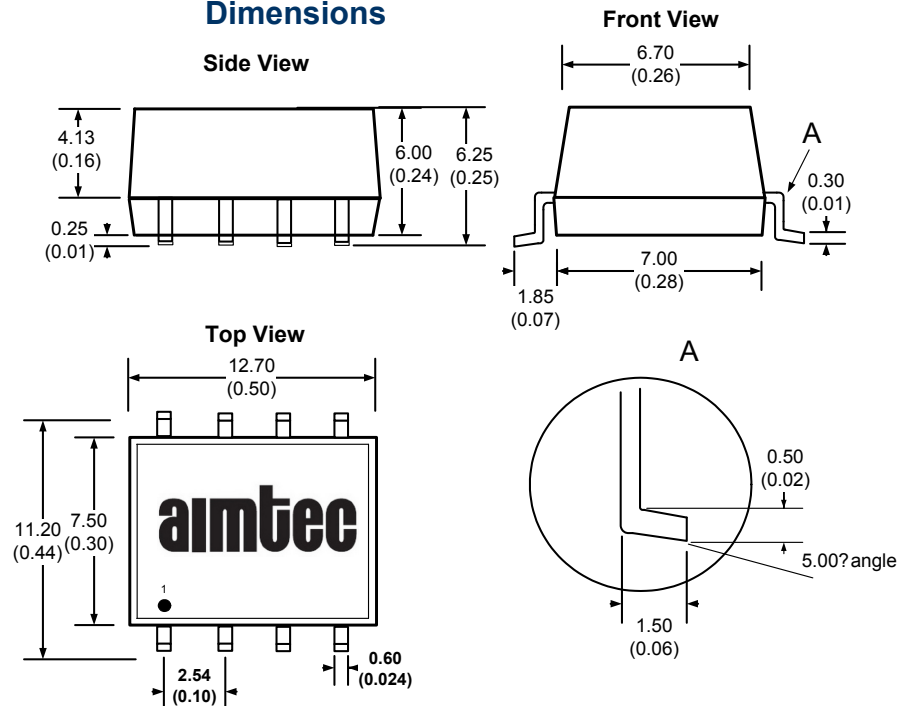
Parameters	Conditions	Typical	Maximum	Units
Humidity			95	% RH
Case material	Plastic UL94-VO			
Weight		1.41		g
Dimensions (L x W x H)	0.50 x 0.30 x 0.24 inches 12.70 x 11.20 x 6.50 mm			
MTBF	> 3,500,000 hours (MIL-HDBK -217F, Ground Benign, t=+25°C)			
Maximum soldering temperature	1.5mm from case for 10 sec		260	°C

Pin Out Specifications

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.

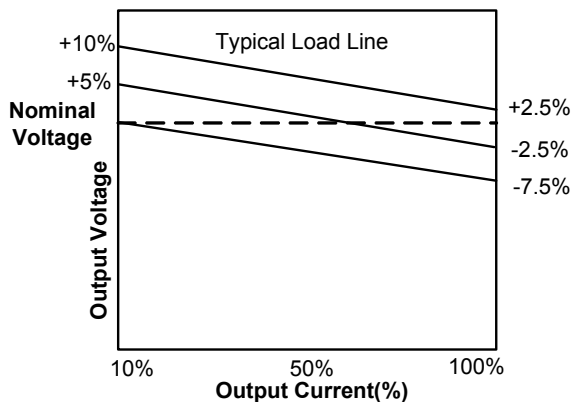
N.C: Not Connected

Dimensions

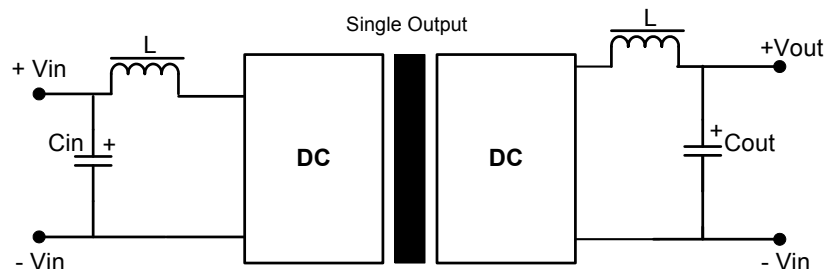


All dimensions are in mm (inch)
All Pins are on a 2.54mm (0.10inch) pitch
with tolerance of ±0.25mm (0.01inch)

Tolerance Graph



Recommended Filter Circuit



- If it is required to decrease the input/output ripple, an “LC” filter network can be installed on the input and output of the converter (see above).
- It should be noted that the inductance and the resonant frequency of the “LC” filtering network should differ from the DC/DC converter switching frequency to avoid mutual interference.
- The capacitance of the output filter capacitor must not exceed the values in the Table below to avoid startup problems and ensure safe and reliable operation.
- It's not recommended to connect any external capacitor in the application field when output loading is less than 0.5 watt.

External Capacitor Tables

Input Capacitor (Cin)

Vin (VDC)	Cin (uF)
5	4.7
12	2.2
24	0.47

Output Capacitor (Cout)

Single Vout (VDC)	Cout (uF)
5	10
12	2.2
15	1
24	0.47

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 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 the ones listed in this datasheet. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.