



FEATURES:

- SMD package
- Ultra Wide (4:1) input range
- 1500VDC isolation
- Continuous short circuit protection
- Operating temperature: -40°C to +85°C
- Regulated single/dual output
- MTBF>1,000,000 hours
- RoHS compliant



Models

Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Efficiency (%)
AM2LW-2403S-NZ	9-36	3.3	455	1500	72
AM2LW-2405S-NZ	9-36	5	300	1500	76
AM2LW-2409S-NZ	9-36	9	167	1500	78
AM2LW-2412S-NZ	9-36	12	125	1500	79
AM2LW-2415S-NZ	9-36	15	100	1500	80
AM2LW-4803S-NZ	18-72	3.3	455	1500	72
AM2LW-4805S-NZ	18-72	5	300	1500	76
AM2LW-4809S-NZ	18-72	9	167	1500	78
AM2LW-4812S-NZ	18-72	12	125	1500	79
AM2LW-4815S-NZ	18-72	15	100	1500	80

Models

Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Efficiency (%)
AM2LW-2405D-NZ	9-36	±5	±150	1500	74
AM2LW-2412D-NZ	9-36	±12	±63	1500	77
AM2LW-2415D-NZ	9-36	±15	±50	1500	75
AM2LW-4805D-NZ	18-72	±5	±150	1500	74
AM2LW-4812D-NZ	18-72	±12	±63	1500	76
AM2LW-4815D-NZ	18-72	±15	±50	1500	76

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

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	24 48	9-36 18-72		VDC
Absolute Maximum Rating	24 48		40 80	VDC
Peak Input Voltage time			100	ms

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		1500	VDC
Resistance	At 500 Vdc	1000		MOhm
Capacitance	Input to Output	1000		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±5		%
Short Circuit protection		Continuous		
Short circuit restart		Auto-Recovery		
Line voltage regulation	From Low in to High In	±0.75		%

Output Specifications (continued)

Parameters	Conditions	Typical	Maximum	Units
Load voltage regulation (Single)	From 10% to 100% load	±1.5		%
Load voltage regulation (Dual)	From 10% to 100% load Unbalanced load	±5		%
Temperature coefficient		±0.03		%/°C
Ripple & Noise	20MHz Bandwidth	100		mV p-p
Minimum Load Current*		10		% of Max

* Operation under 10% load will not damage the converter; however, not all specifications will be met.

General Specifications

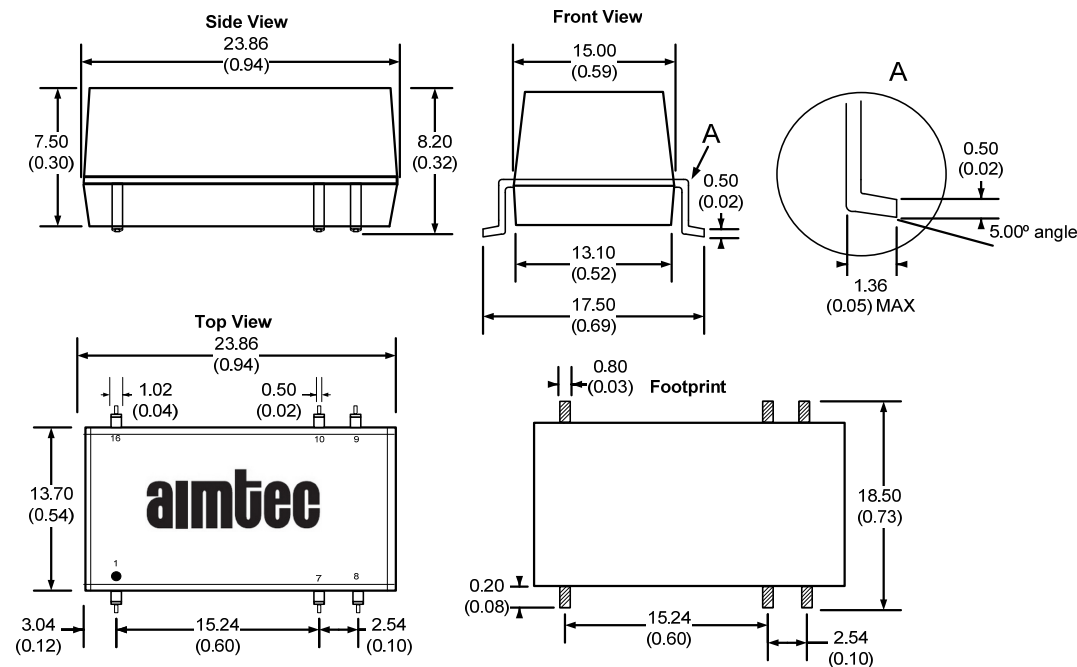
Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	550		KHz
Operating temperature		-40 to +85		°C
Storage temperature		-55 to +125		°C
Maximum case temperature			100	°C
Derating	Above 71°	2.9		%/°C
Cooling	Free Air Convection			
Humidity			95	% RH
Case material	Plastic (UL94-V0)			
Weight		5.2		g
Dimensions (L x W x H)	0.94 x 0.54 x 0.32 inches 23.86 x 13.70 x 8.00 mm			
MTBF	>1,000,000 hours (MIL-HDBK -217F, Ground Benign, t=+25°C)			
Maximum Soldering Temperature	1.5mm from case for 10 seconds		300	°C

Pin Out Specifications

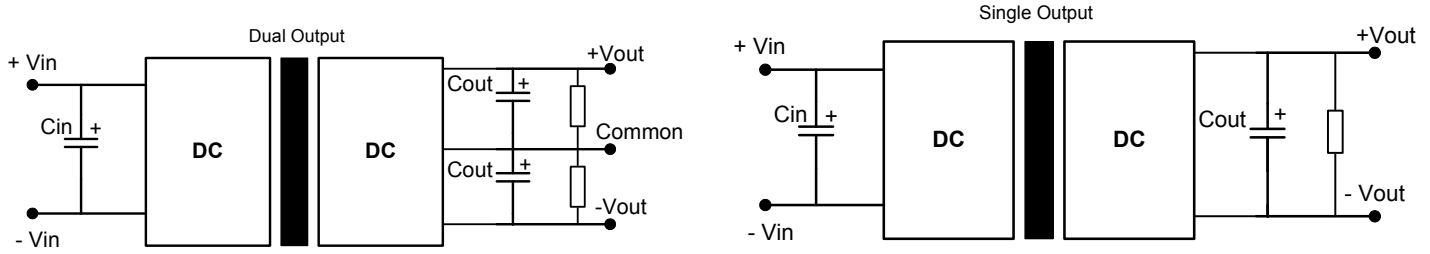
Pin	Single	Dual
1	- Vin	- Vin
7	NC	NC
8	NC	Common
9	+Vout	+Vout
10	- Vout	-Vout
16	+ Vin	+ Vin

NC – not connected

Dimensions



Recommended Filter Circuit



All the AM2LW-Z Series have been tested with the above recommended test circuit. This series should be tested under load.

If it is necessary to further decrease the input/output ripple, the value of the filter capacitor can be increased; a capacitor with a low ESR should be used. Excessive filter capacitance can cause start up problems with the converter.

In general, the recommended capacitance values are:

C_{in} : $10\mu F \sim 47\mu F$

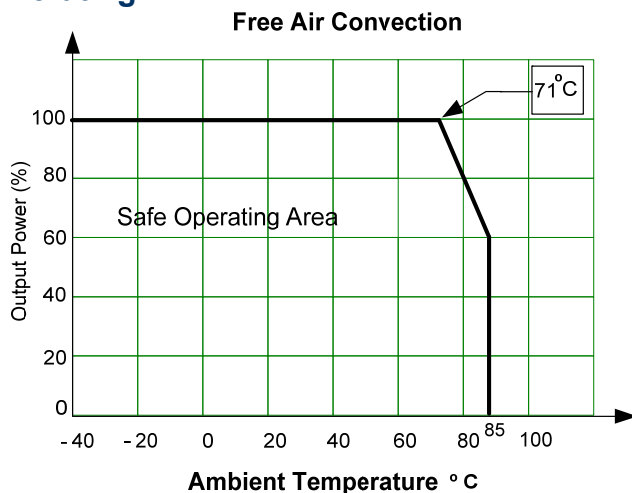
C_{out} : $10\mu F/100mA$

Refer to table below for maximum capacitor values:

External Capacitor Value

Single Output Vout (VDC)	Cout (uF)	Dual Output Vout (VDC)	Cout (uF)
5	1000	± 5	± 680
12	470	± 12	± 330
15	330	± 15	± 220

Derating



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