

### FEATURES:



- Low Profile SMD
- Continuous Short circuit protection
- Pin-out compatible with DCP01 Series
- Operating Temperature: -40°C to +105°C
- 3000 VDC Isolation regulated model
- 1500 VDC Isolation unregulated models



### Models Single output

Model	Input Voltage(V)	Output Voltage (V)	Output Current max(mA)	Maximum Capacitive Load (μF)	Isolation (VDC)	Efficiency (%)
AM1LT-0505S-NZ	4.5-5.5	5	200	220	1500	76
AM1LT-0512S-NZ *	4.5-5.5	12	83	220	1500	77
AM1LT-0515S-NZ *	4.5-5.5	15	67	220	1500	76
AM1LT-1212S-NZ *	10.8-13.2	12	83	220	1500	76
AM1LT-0505SH30-NZ	4.75 -5.25	5	200	220	3000	70
AM1LT-1205SH30-NZ	11.4-12.6	5	200	220	3000	72

\* Models will be discontinued by December 31st, 2017 (EOL date). For new designs, please see new generation models of **AM1LS-NZ** series.

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 12	4.5-5.5 & 4.75-5.25 10.8-13.2 & 11.4-12.6		VDC
Full load Input current	5Vin, 5Vout, 1500V Isolation 5Vin, 5Vout, 3000V Isolation 5Vin, 12 & 15Vout 12Vin	250 285 271 115		mA
No load Input current	5Vin, 5Vout 5Vin, 12 & 15Vout 12Vin	25 30 15		mA
Absolute Max Input	5 12		-0.7 – 9 -0.7 - 18	VDC
Filter		Capacitor		
Input reflected ripple current	5Vin, 5Vout, 1500V Isolation	15		mA p-p

### Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 Sec, 1mA		1500 & 3000	VDC
Resistance	500Vdc	1000		MOhm
Capacitor	5Vin, 5Vout, I/O, 100KHz/0.1V Others, I/O, 100KHz/0.1V	20 25		pF

### Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	1500V Isolation models 3000V Isolation models		See tolerance envelope graph ±3	%
Short Circuit protection		Continuous		
Short circuit restart		Auto-Recovery		
Line voltage regulation	For 1500V Isolation models & Vin change of 1% For 3000V Isolation models & Vin change of 5%	±1.2 ±0.25		% of Vin

Load voltage regulation	10% to 100% load for 1500V Isolation models		±15	%
	10% to 100% load for 3000V Isolation models		±1	
Temperature coefficient	Nominal input, 100% full load	0.03		%/°C
Ripple & Noise	20MHz Bandwidth	60	100	mVp-p
Minimum Load Current		10		% of Max

NOTE: It is not recommended to have the outputs connected in parallel.

## General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	5Vin, 5Vout, 100% load Others, 100% load	100 100	300	KHz
Operating temperature	For 1500V isolation no derating, see derating curve For 3000V Isolation derating above 71°C	-40 to + 85		°C
Storage temperature		-55 to +125		°C
Maximum case temperature			100	°C
Cooling	Free Air Convection			
Humidity			95	% RH
Case material	Epoxy Resin(UL94-V0)			
Weight		1.4		g
Dimensions (L x W x H)	0.77 x 0.42 x 0.20 inches, 19.50 x 10.53 x 5.10 mm			
MTBF	>1,500,000 hours (MIL-HDBK -217F, Ground Benign, t=+25°C) for 1500V Isolation models			
	>3,500,000 hours (MIL-HDBK -217F, Ground Benign, t=+25°C) for 3000V Isolation models			
Maximum Soldering Temperature*	1.5mm from case for 10 seconds		260	°C

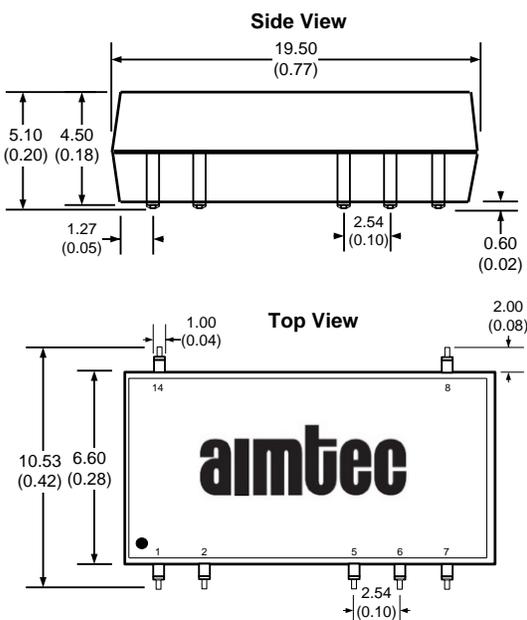
\* Manual soldering

## Pin Out Specifications

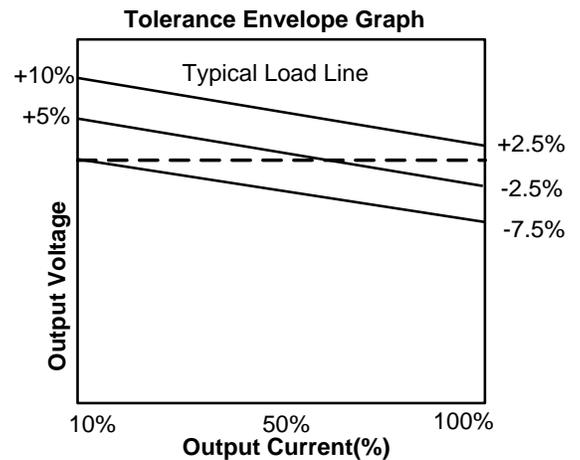
Pin	Single
1	+Vin
2	-Vin
5	-Vout
6	+Vout
7	NC
8	NC
14	NC

NC: not connected

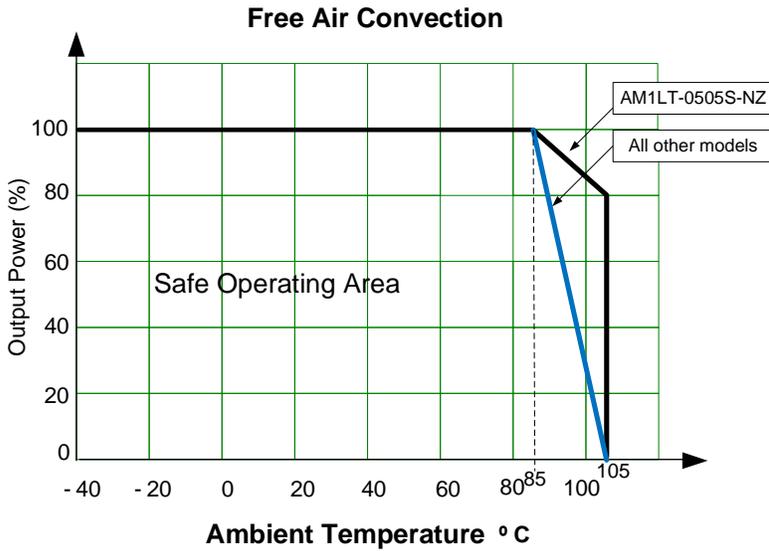
## Dimensions



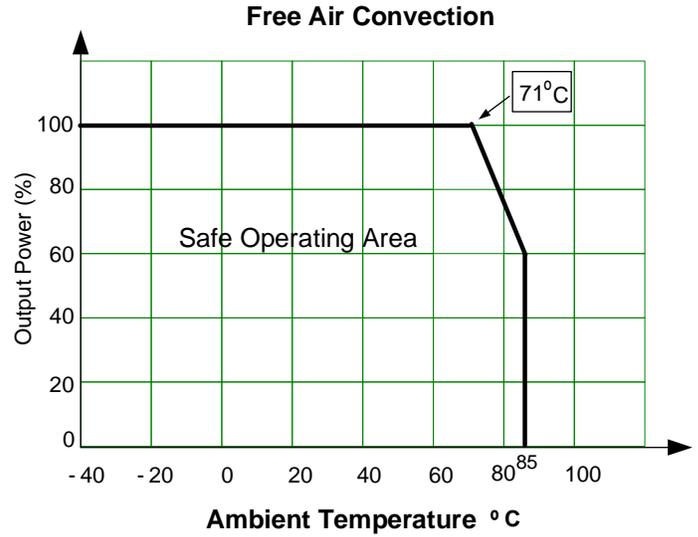
## Typical Characteristics



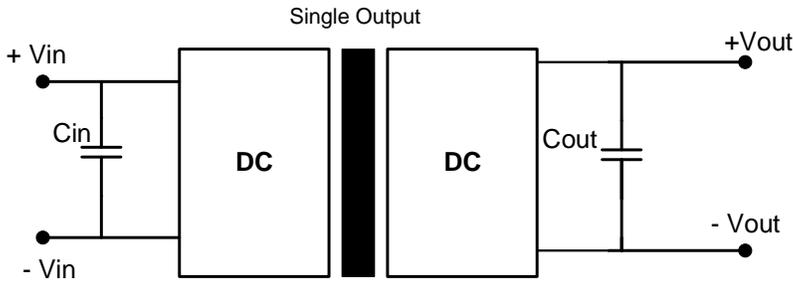
**Derating for 1500VDC Isolated models**



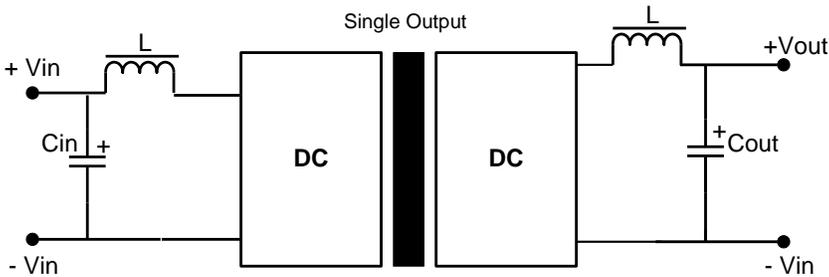
**Derating for 3000VDC Isolated models**



**Typical application circuit for 1500VDC Isolated models**



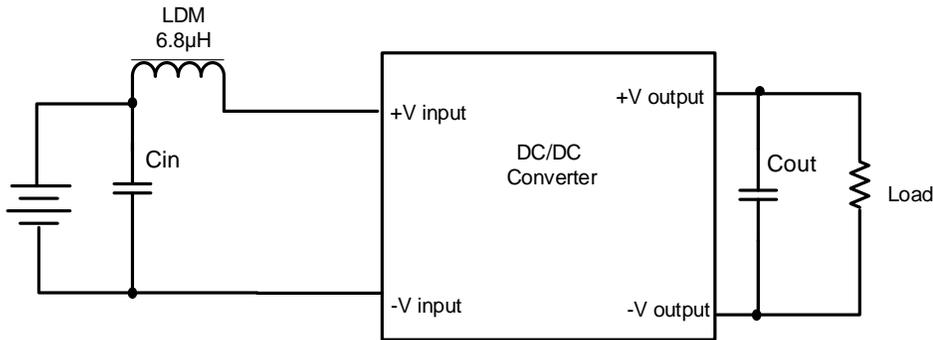
**Typical application circuit for 3000VDC Isolated models**



It is not recommended to connect any external capacitor in the application field when output loading is less than 0.5 watt.

Vin (VDC)	Cin (uF)	Vout (VDC)	Cout (uF)
5	4.7	5	10
12	2.2	12	2.2
		15	1

### EMI Recommended Circuit (Class B) for 1500VDC Isolated models



NOTE: Cin and Cout values are the same as referenced in the Application Circuit.

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