

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-0505SH30-NZ	4.75 -5.25	5	200	220	3000	70
AM1LT-1205SH30-NZ	11.4-12.6	5	200	220	3000	72

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 11.4-12.6		VDC
Full load Input current	5Vin, 5Vout, 1500V Isolation 5Vin, 5Vout, 3000V Isolation 12Vin, 5Vout, 3000V Isolation	250 285 115		mA
No load Input current	5Vin, 5Vout 12Vin, 5Vout	25 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 10% to 100% load for 3000V Isolation models		±15 ±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 derating above 85°C	-40 to + 105		°C
	For 3000V Isolation derating above 71°C	-40 to + 85		
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

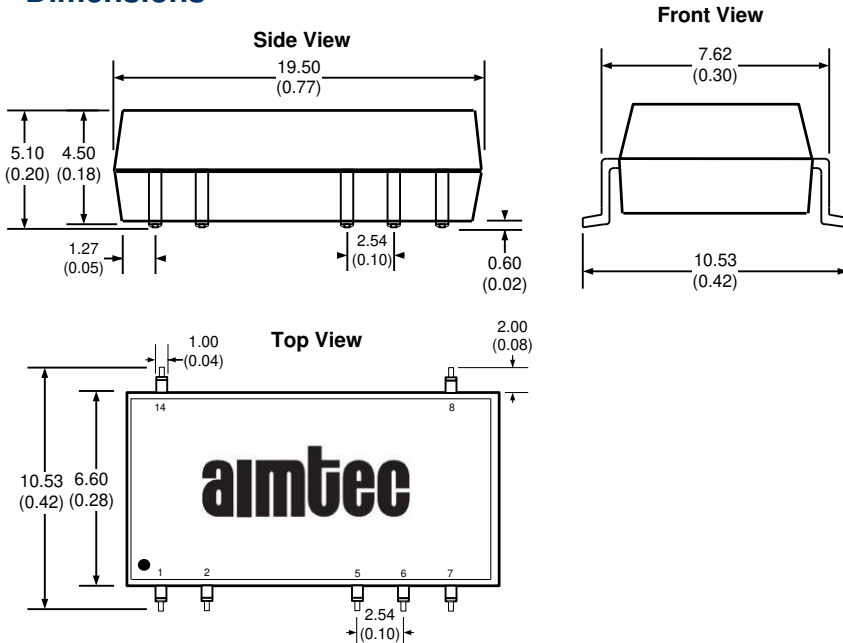
* Manual soldering

Pin Out Specifications

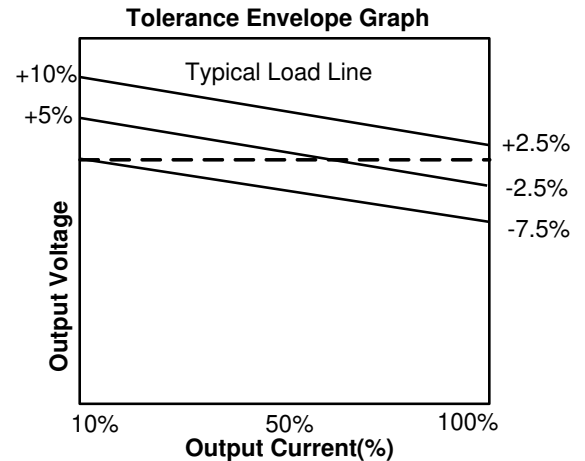
Pin	Single
1	+Vin
2	-Vin
5	-Vout
6	+Vout
7	NC
8	NC
14	NC

NC: not connected

Dimensions

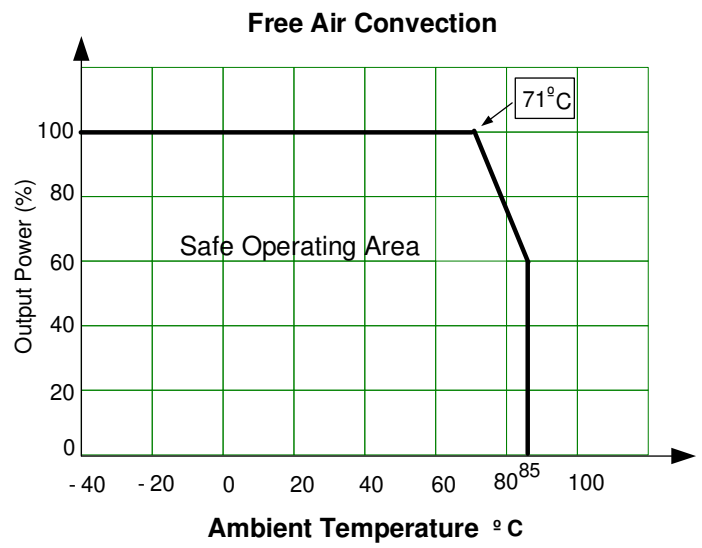
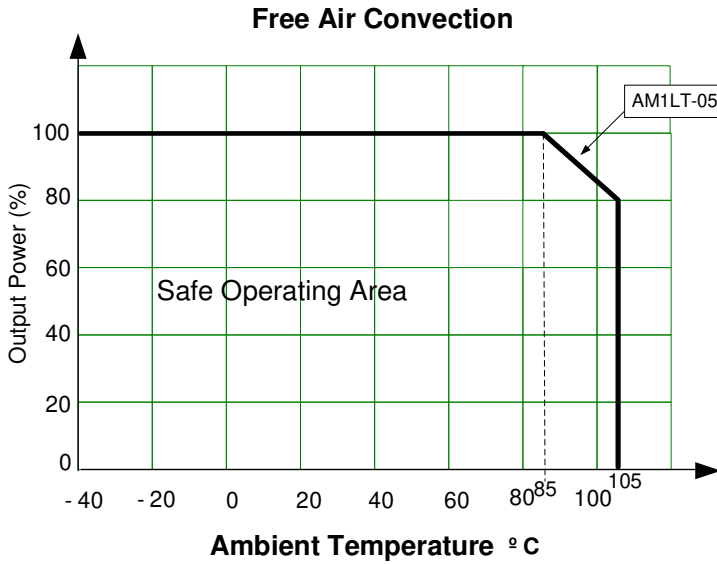


Typical Characteristics

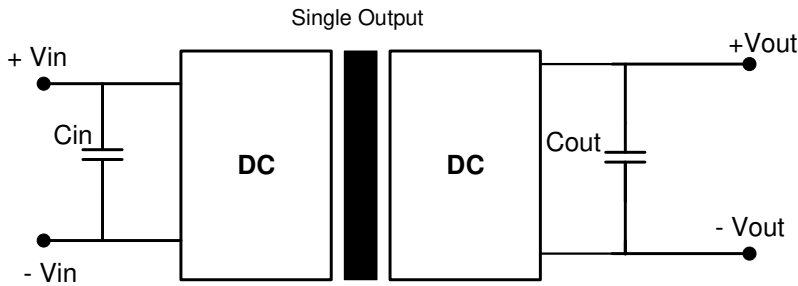


Derating for 1500VDC Isolated models

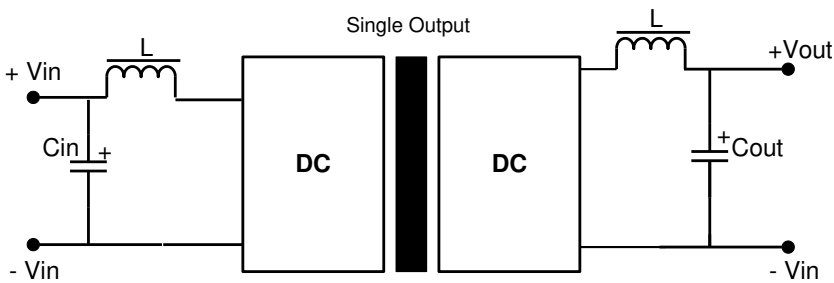
Derating for 3000VDC Isolated models



Typical application circuit for 1500VDC Isolated models



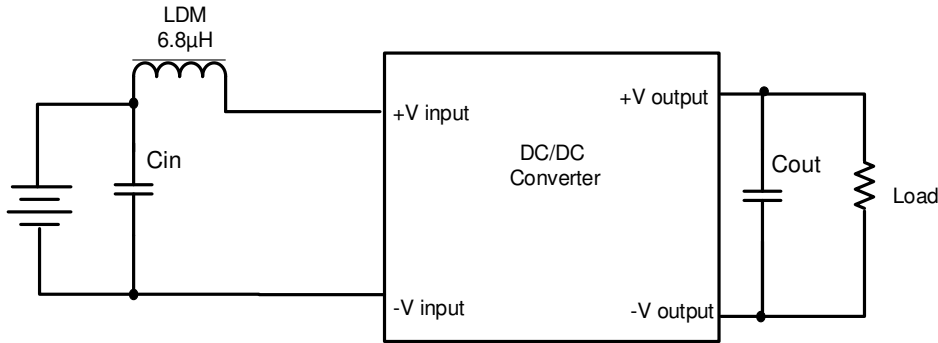
Typical application circuit for 3000VDC Isolated models



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		

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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