RSG Electronic Components GmbH • Sprendlinger Landstr. 115 • D-63069 Offenbach/Germany Tel. +49 69 984047-0 • Fax +49 69 984047-77 • info@rsg-electronic.de • **www.rsg-electronic.de** Anderungen vorbehalten / subject to change without notice

查询"A0509LT-2W"供应商

A_LT-2W Series FIXED INPUT ISOLATED & UNREGULATED 2W DUAL OUTPUT UTRALMINIATURE SMD PACKAGE



Multi-country patent protection RoHS

FEATURES

FLECTRONIC COMPONENTS

- High Efficiency up to 85%
- High Power Density
- SMD Package Styles
- Small Footprint
- 1kVDC Isolation
- Temperature Range: -40°C -+85°C
- Industry Standard Pinout
- No Heatsink Required
- No External Component Required
- RoHS Compliance

APPLICATIONS

The A_LT-2W Series are specially designed for applications where a group of polar power supplies are isolated from the input power supply in a distributed power supply system on a circuit board.

These products apply to:

- Where the voltage of the input power supply is fixed (voltage variation ≤±10%);
- Where isolation is necessary between input and output (isolation voltage =1000VDC);
- Where the regulation of the output voltage and the output ripple noise are not demanding.

Such as: purely digital circuits, ordinary low frequency analog circuits, and IGBT power device driving circuits.

MODEL SELECTION

A0505LT-2W



Rated Power Package Style Output Voltage Input Voltage Product Series

PRODUCT PROGRAM									
Part	Inp	out		Output		Efficiency	Deekege		
Number	Voltage (VDC)		Voltage	Current (mA)		Efficiency (%, Typ)	Package Style		
Humbor	Nominal	Range	(VDC)	Max	Min	(/0, 190)	Ctyle		
A0505LT-2W			±5	±200	±20	82	SMD		
A0509LT-2W	5	4.5~5.5	±9	±111	±11	83	SMD		
A0512LT-2W			±12	±83	±8	84	SMD		
A1205LT-2W		10.8~13.2	±5	±200	±20	83	SMD		
A1209LT-2W	12		±9	±111	±11	84	SMD		
A1212LT-2W			±12	±83	±8	84	SMD		
A1215LT-2W			±15	±67	±7	85	SMD		

Note: The A_T-1W series also are available in our company.

COMMON SPECIFICATIONS							
Short circuit protection	1 second						
Temperature rise at full load	25°C Max, 15°C Typ						
Cooling	Free air convection						
Operating temperature range	-40°C~+85°C						
Storage temperature range	-55°C ~+125°C						
Lead temperature	260°C (1.5mm from case for 10 seconds)						
Storage humidity range	≤ 95%						
Case material	Plastic (UL94-V0)						
MTBF	>3,500,000 hours						

ISOLATION SPECIFICATIONS									
Item	Test conditions	Min	Тур	Max	Units				
Isolation voltage	Tested for 1 minute and 1mA max	1000			VDC				
Isolation resistance	Test at 500VDC	1000			MΩ				

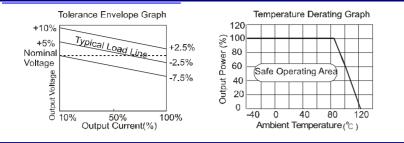
OUTPUT SPECIFICATIONS								
Item	Test conditions	Min	Тур	Max	Units			
Output power		0.2		2	W			
Line regulation	For Vin change of 1%			1.2	%			
	10% to 100% load (5V output)		10	15				
Load regulation	10% to 100% load (9V output)		6.5	15	%			
Load regulation	10% to 100% load (12V output)		6.0	15	70			
	10% to 100% load (15V output)		6.0	15				
Output voltage accuracy	See tolerance envelope graph							
Temperature drift	100% full load			0.03	%/°C			
Output ripple	20MHz Bandwidth		75	150	mVp-p			
Noise	20MHz Bandwidth		150	250	ιινρ-ρ			
Switching frequency	Full load, nominal input		70		kHz			

Note:

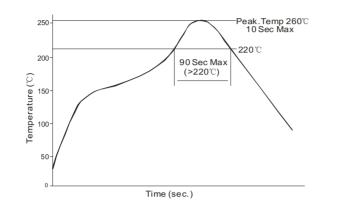
1. All specifications measured at TA= $25^{\circ}C$, humidity<75%, nominal input voltage and rated output load unless otherwise specified.

2. See below recommended circuits for more details.

TYPICAL OPARACTERISTICS

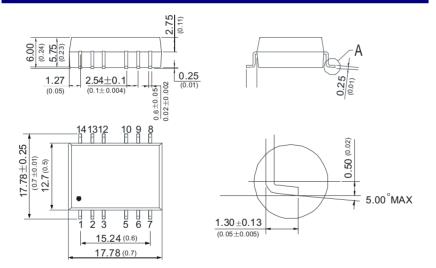


RECOMMENDED REFLOW SOLDERING PROFILE



PIN CONNECTIONS

Pin	1	2	3	5	6	7	8	9	10	12	13	14
Function	GND	Vin	NC	-Vo	OV	+ Vo	NC	NC	- Vo	NC	NC	NC
OUTLINE DIMENSIONS& RECONMENDED FOOTPRINT DETAILS												



Note: All Pins on a 2.54mm(0.1) pitch; All Pin Widths are 0.60 mm(0.02);

Tolerances:±0.15mm(0.006); Unit: mm(inch)

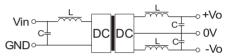
APPLICATION NOTE

Requirement on output load

To ensure this module can operate efficiently and reliably, a minimum load is specified for this kind of DC/DC converter in addition to a maximum load (namely full load). During operation, make sure the specified range of input voltage is not exceeded, the minimum output load is not less than 10% of the full load, and that this product should never be operated under no load! If the actual output power is very small, please connect a resistor with proper resistance at the output end in parallel to increase the load, or use our company's products with a lower rated output power (A_T-1W series).

Filtering

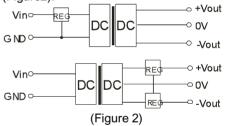
In some circuits which are sensitive to noise and ripple, a filtering capacitor may be added to the DC/DC output end and input end to reduce the noise and ripple. However, the capacitance of the output filter capacitor must be proper. If the capacitance is too big, a startup problem might arise. For every channel of output, provided the safe and reliable operation is ensured, the greatest capacitance of its filter capacitor sees the EXTERNAL **CAPACITOR TABLE.** To get an extremely low ripple, an "LC" filtering network may be connected to the input and output ends of the DC/DC converter, which may produce a more significant filtering effect. It should also be noted that the inductance and the frequency of the "LC" filtering network should be staggered with the DC/DC frequency to avoid mutual interference (Figure 1).



(Figure 1)

Output Voltage Regulation and **Over-voltage Protection Circuit**

The simplest device for output voltage regulation, over-voltage and over-current protection is a linear voltage regulator with overheat protection that is connected to the input or output end in series (Figure2)



Overload Protection

Under normal operating conditions, the output circuit of these products has no protection against over-current and short-circuits. The simplest method is to connect a self-recovery fuse in series at the input end or add a circuit breaker to the circuit.

EXTERNAL CAPACITOR TABLE

V _{in}	External capacitor	V	
5VDC	4.7uF	5VDC	4.7uF
12VDC	2.2uF	9VDC	2.2uF
		12VDC	1uF
		15VDC	0.47uF

It's not recommend to connect any external capacitor in the application field with less than 0.5 watt output.

MORNSUN reserves the copyright For any design change and upgrade, we will not make any prior notification A/1-2007



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