

# 1 Watt | DC-DC Converter



#### **FEATURES:**

- RoHS compliant
- Regulated output voltage
- Low ripple and noise
- High efficiency up to 73%
- Operating temperature -40°C to + 85°C
- Input / Output Isolation 1000 & 3000VDC
- Pin computable with multiple manufacturers
- UL94-VO Package



### Models Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Efficiency (%)
AM1DR-0505S-NZ	4.75-5.25	5	150	1000	69
AM1DR-0509S-NZ	4.75-5.25	9	111	1000	70
AM1DR-0512S-NZ	4.75-5.25	12	84	1000	71
AM1DR-0515S-NZ	4.75-5.25	15	67	1000	72
AM1DR-1205S-NZ	11.4-12.6	5	150	1000	69
AM1DR-1209S-NZ	11.4-12.6	9	111	1000	71
AM1DR-1212S-NZ	11.4-12.6	12	84	1000	72
AM1DR-1215S-NZ	11.4-12.6	15	67	1000	72
AM1DR-2405S-NZ	22.8-25.2	5	150	1000	70
AM1DR-2409S-NZ	22.8-25.2	9	111	1000	72
AM1DR-2412S-NZ	22.8-25.2	12	84	1000	73
AM1DR-2415S-NZ	22.8-25.2	15	67	1000	73
AM1DR-0505SH30-NZ	4.75-5.25	5	150	3000	68

**Input Specifications** 

Parameters	Nominal	Typical	Maximum	Units
	5	4.75-5.25		VDC
Voltage range	12	11.4-12.6		
	24	22.8-25.2		
Filter	Capacitor			

**Isolation Specifications** 

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		1000 & 3000	VDC
Resistance		>1000		MOhm
Capacitance		60		pF

**Output Specifications** 

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±3		%
Short Circuit protection		Moment	ary (1sec)	
Line voltage regulation (Single)	Input voltage: ±5%	±0.25		%
Load voltage regulation (Single)	10-100%	±1		%
Temperature coefficient		±0.03		%/°C
Ripple & Noise		50		mV p-p

**General Specifications** 

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	100		KHz
Operating temperature	Derating above 71 °C	-40 to +85		°C
Storage temperature		-55 to +125		°C
Cooling		Free air convection		
Humidity			95	%



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**General Specifications (continued)** 

Parameters	Conditions	Typical	Maximum	Units
Case material	Plastic UL94-VO			
Weight		2.7		g
Dimensions (L x W x H)	0.77 x 0.24 x 0.37 inch 19.60 x 6.00 x 9.50 mm			
MTBF	>900 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			

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

### **Pin Out Specification**

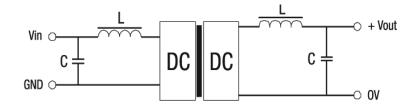
Pin	Single 1000 & 3000VDC	
1	+ V Input	
2	- V Input	
4	- V Output	
5	No pin	
6	+ V Output	
7	No pin	

## **External capacitor**

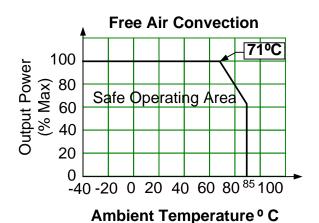
Vin (VDC)	External capacitor (uF)	Vout (VDC)	External capacitor (uF)
5	4.7	5	10
12	2.2	9	4.7
24	1	12	2.2
-	-	15	1

### **Dimensions** 6.00 (0.24) PRINTED 10.0 9.50 (0.39)(0.37)0.50 4.10 (0.02)2.54 (0.16) 15.20 (0.60)0.50 (0.02) 6.00 0.50 (0.24)(0.02) (0.05)

#### **Filtering**



### **Derating**



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