

**Features**

- Economical open frame power supply
- UL94V-0 Package Material
- Operating Temperature:-40°C TO +85°C
- Efficiency up to 91%
- Non isolated, no need for heatsinks
- Short circuit protection



**NON-ISOLATED  
DC/DC Converter**

**Input Specifications**

Input Voltage Range	:8~36Vdc
Input current no load	:0.2mA TYP

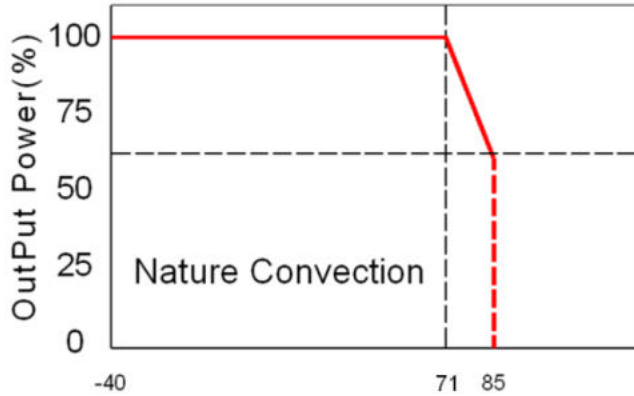
**Output Specifications**

Output Voltage	:6.5Vdc	
Output Voltage Accuracy	:±3%	@Vout=6.305~6.695Vdc @Vin=8~36Vdc
Output Current	:500mA	
Efficiency	:91% TYP @Min Vin	
	:83% TYP @Max Vin	
Ripple / Noise	:100mVp-p MAX	@20MHz Bandwidth
Short Circuit Protection	:Continuous	@auto-recovery
Line Regulation	:±0.5% MAX	@ at Full Load
Load Regulation	:±1.0% MAX	@10% to 100% load
Capacitive Load Max.	:680μF	

**General Specifications**

Operating Temperature Range	:-40°C ~ +85°C (with derating)	Output load derate 2.86% per degree Celsius above 71°C as refer to temperature derating graph.
Storage Temperature	:-55°C ~ +125°C	
Switching Frequency	:1.2MHz TYP	
Humidity	:95% MAX	
Cooling	:Free air convection	
MTBF	:>5000x10 <sup>3</sup> Hours	MIL-HDBK-217F@25°C,Ground Benign.
Weight	:0.75 g TYP	
Conducted Emission	:EN55022 Class A	
Radiated Emission	:EN55022 Class A	

Temperature Derating Graph



Part Number

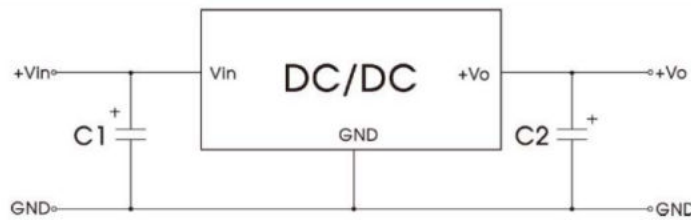
01DS — 6R5 — 500  
 A B C

A: Series

B: Output Voltage

C: Output Current

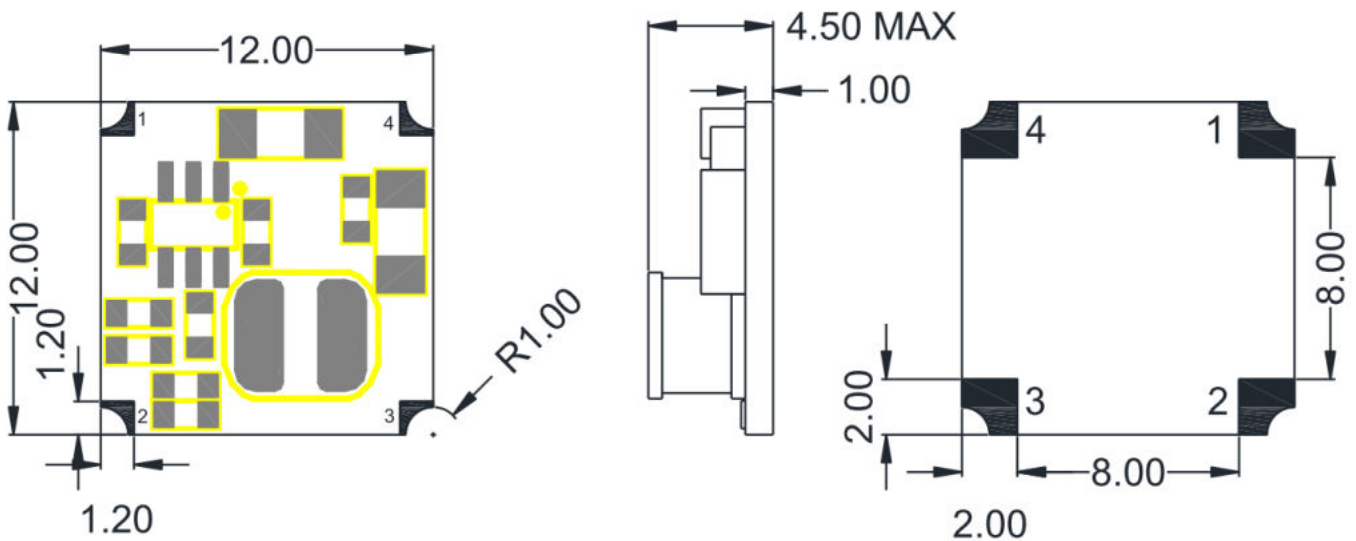
Recommended Test Circuit



Cin	Cout
10μF/50V	22μF/16V

To make sure the product work at perfect operation status with full loading external capacitor is necessary and it is recommended to use high frequency low resistance electrolytic capacitor.

Outline Dimensions



UNIT: mm Unless otherwise specified, all tolerances are ±0.25

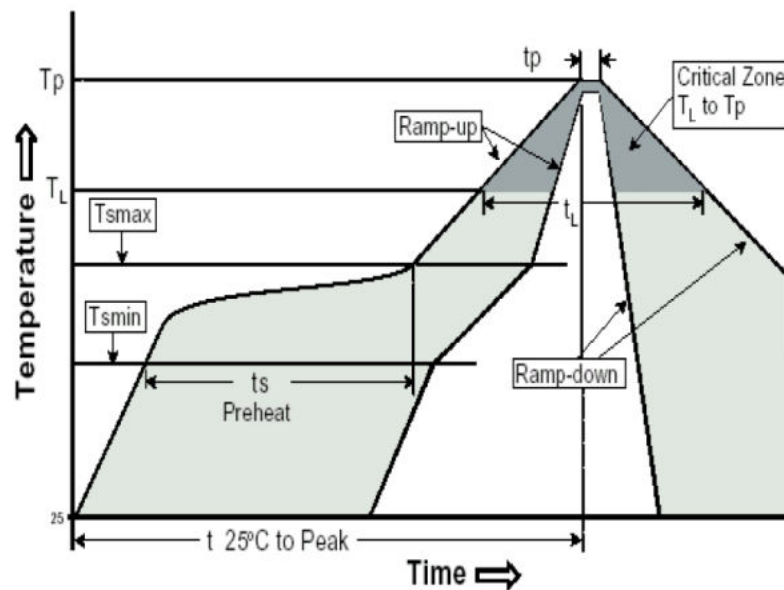
PIN Assignment

PIN	1	2	3	4
FUNCTION	+Vin	NC	+Vout	GND

## RoHS compliant type

Our RoHS parts just can withstand IR Reflow peak temperature: 240degC +/-5degC as the following profile:

Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate ( $T_{s_{max}}$ to $T_p$ )	3°C /second max.
Preheat -Temperature Min ( $T_{s_{min}}$ ) -Temperature Max ( $T_{s_{max}}$ ) -Time ( $t_{s_{min}}$ to $t_{s_{max}}$ )	150°C 200°C 60-180 seconds
<b>Time maintained above:</b> -Temperature ( $T_L$ ) -Time ( $t_L$ )	217°C 60-150 seconds
Peak/Classification Temperature ( $T_p$ )	240±5 °C
Time within 5°C of actual Peak Temperature ( $t_p$ )	20-40 seconds
Ramp-Down Rate	6°C/seconds max
Time 25°C to Peak Temperature	6 minutes max.



**Packing Information:**

- 1. Weight-----0.75 grams/pcs
- 2. Tape & Reel----- 700 pcs
- 3. outer carton unit: 7000pcs/box
- 4. outer carton unit: 10T&R/box
- 5. Weight: 11.3kg per carton

