

## Features

- 1WATT SIP PACKAGE
- EFFICIENCY TO 84%
- 100% BURNED IN
- UL 94V-0 PACKAGE MATERIAL
- CUSTOM SOLUTIONS AVAILABLE
- UNREGULATED OUTPUT TYPES



**1 Watt DC/DC Converter**

1 Watt Single O/P  
Isolated DC-DC Converter <sup>®</sup>

## Input Specifications

|                     |       |
|---------------------|-------|
| Input Voltage       | :5Vdc |
| Input Voltage Range | :±10% |

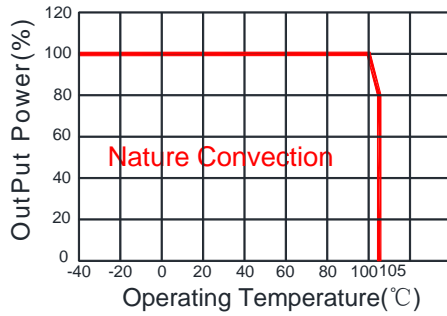
## Output Specifications

|                          |                           |                             |
|--------------------------|---------------------------|-----------------------------|
| Output Voltage           | :12Vdc                    |                             |
| Output Voltage Accuracy  | :±5%                      | @Vout=11.4~12.6Vdc@Vin=5Vdc |
| Output Current           | :84mA                     |                             |
| Efficiency               | :84% TYP                  |                             |
| Ripple / Noise           | :30mVp-p TYP, 75mVp-p MAX | @20MHz Bandwidth            |
| Short Circuit Protection | : Continuous              |                             |
| Line Regulation          | :±1.2% TYP                | @For 1.0% OF Vin            |
| Load Regulation          | :±7% TYP, ±10% MAX        | @10% to 100% full load      |
| Capacitive Load          | :470uF MAX                |                             |

## General Specifications

|                             |                       |  |
|-----------------------------|-----------------------|--|
| Operating Temperature Range | : -40°C ~ +105°C      |  |
| Storage Temperature         | : -55°C ~ +125°C      |  |
| Switching Frequency         | : 215 or 370KHz TYP   |  |
| Humidity                    | : 95% MAX             |  |
| Isolation Voltage           | : 1500Vdc             | @ Input to Output ( 60sec/0.5mA )                            |
| Isolation Resistance        | : 1000MΩ MIN          | @ 500Vdc   |
| Isolation Capacitance       | : 20pF TYP            | @ 100KHz, 1V   |
| Cooling                     | : Free air convection |  |
| MTBF                        | : >3500000 Hours      | MIL-HDBK-217F@25°C, Ground Benign.                           |
| Case Material               | : DAP                 |  |
| Weight                      | : 2.1g TYP            |  |
| EMI                         | CE                    | CISPR32/EN55032 CLASS B (see Fig. 1 for recommended circuit) |
|                             | RE                    | CISPR32/EN55032 CLASS B (see Fig. 1 for recommended circuit) |
| EMS                         | ESD                   | IEC/EN61000-4-2 Air ±8kV , Contact ±6kV perf. Criteria B     |

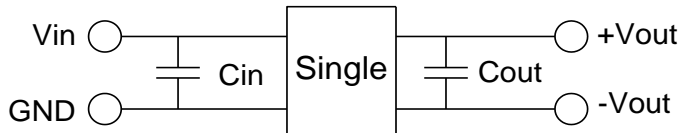
## Temperature Derating Graph



## Part Number

**14DC** - **05** **S** **12** **N** **P**  
**A** **B** **C** **D** **E** **F**  
 A:Series  
 B:Input Voltage  
 C: Single Output  
 D: Output Voltage  
 E:Unregulated(N)  
 F:Protection

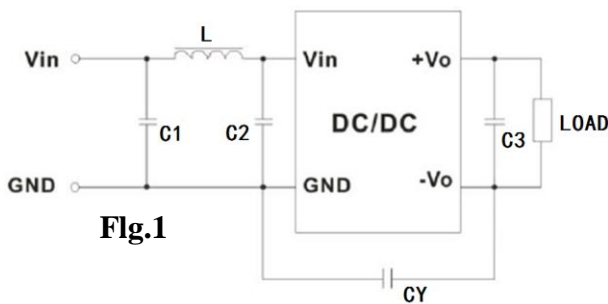
## Recommended Test Circuit



| Vin  | Cin       | SingleVout | Cout      |
|------|-----------|------------|-----------|
| 5Vdc | 4.7μF/25V | 12Vdc      | 2.2μF/25V |

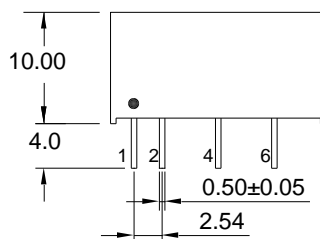
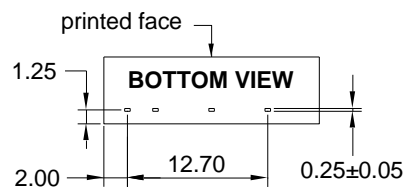
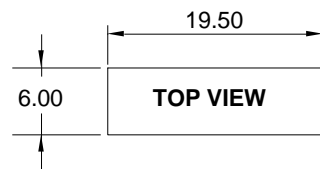
To make sure the product work at perfect operation status with full loading external capacitor is necessary and it is recommended to use high frequency low resistance electrolytic capacitor.

## EMC (CLASS B) compliance circuit



| EMC recommended circuit value table |    |                          |
|-------------------------------------|----|--------------------------|
| EMI                                 | C1 | 4.7μF /50V               |
|                                     | C2 | 4.7μF /50V               |
|                                     | CY | 1nF/4kV                  |
|                                     | C3 | Recommended Test Circuit |
|                                     | L  | 6.8μH                    |

## Outline Dimensions



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

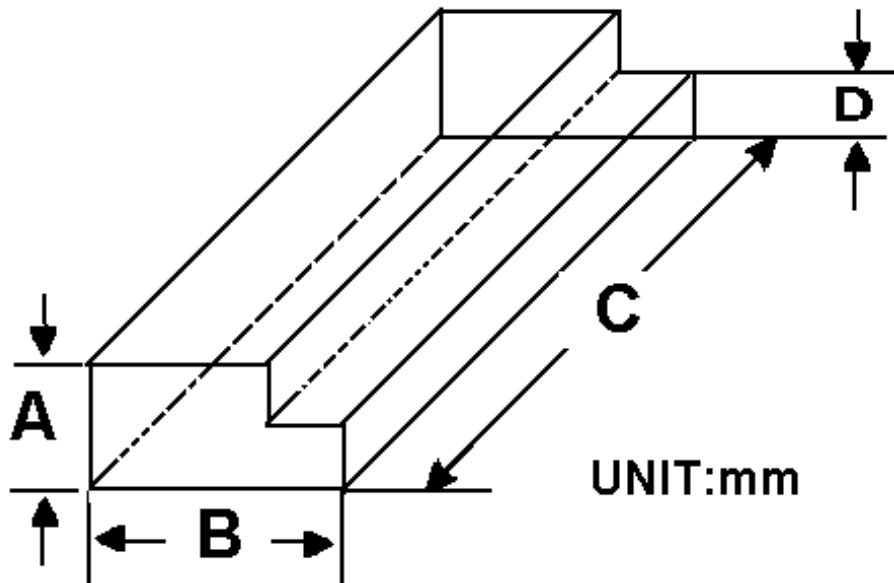
| PIN           | 1    | 2    | 4     | 6     |
|---------------|------|------|-------|-------|
| <b>Single</b> | +Vin | -Vin | -Vout | +Vout |

**Packing Information:**

Weight----- 2.1grams/pcs

TUBE-----25pcs

Weight: 73g per tube



| Size(mm) |       |     |      |
|----------|-------|-----|------|
| A        | B     | C   | D    |
| 9.50     | 16.50 | 522 | 5.00 |

Outer carton unit: 2500pcs/100Tube/box

Weight: 7.5kg per carton

