

## Features

- 2WATT SIP PACKAGE
- EFFICIENCY TO 78%
- 100% BURNED IN
- No-load Input Current as Low as 5mA
- UL 94V-0 PACKAGE MATERIAL
- CUSTOM SOLUTIONS AVAILABLE
- UNREGULATED OUTPUT TYPES



**2 Watt DC/DC  
Converter**

**2 Watt Dual O/P  
Isolated DC-DC Converter**

## Input Specifications

|                     |        |
|---------------------|--------|
| Input Voltage       | :12Vdc |
| Input Voltage Range | :±10%  |

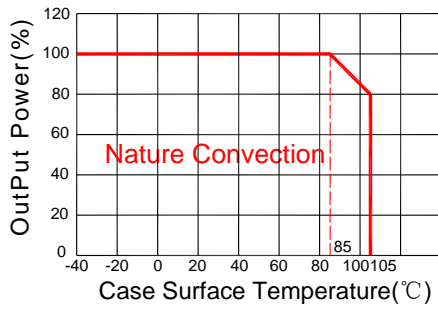
## Output Specifications

|                          |                            |                                |
|--------------------------|----------------------------|--------------------------------|
| Output Voltage           | :3.3Vdc                    |                                |
| Output Voltage Accuracy  | :±5%                       | @Vout=3.135~3.465Vdc@Vin=12Vdc |
| Output Current           | :600mA                     |                                |
| Efficiency               | :78% TYP                   |                                |
| Ripple / Noise           | :75mVp-p TYP, 150mVp-p MAX | @20MHz Bandwidth               |
| Short Circuit Protection | : Continuous               |                                |
| Line Regulation          | :±1.2% TYP                 | @For 1.0% OF Vin               |
| Load Regulation          | :±15% TYP, ±20% MAX        | @10% to 100% full load         |
| Capacitive Load          | :1200uF MAX                |                                |

## General Specifications

|                             |                       |  |
|-----------------------------|-----------------------|--|
| Operating Temperature Range | : -40°C ~ +105°C      |  |
| Storage Temperature         | : -55°C ~ +125°C      |  |
| Switching Frequency         | : 250KHz TYP          |  |
| Humidity                    | : 95% MAX             |  |
| Isolation Voltage           | : 3000Vdc             | @ Input to Output ( 60sec/0.5mA )                            |
| Isolation Resistance        | : 1000MΩ MIN          | @ 500Vdc   |
| 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 ±4kV perf. Criteria B     |

## Temperature Derating Graph



## Part Number

12DC - 12 S 03 N P 2 H3  
A B C D E F G H

A:Series  
B:Input Voltage  
C:Single Output  
D:Output Voltage  
E:Unregulated(N)  
F:Protection  
G:Output Power  
H:Isolation Voltage

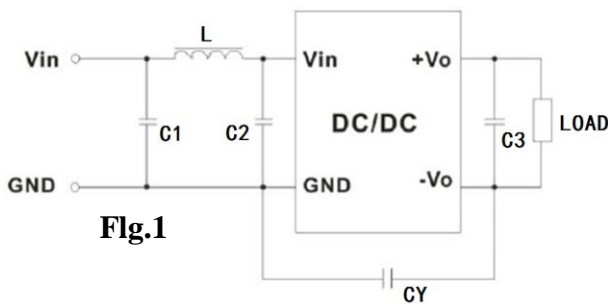
## Recommended Test Circuit



| Vin   | Cin       | SingleVout | Cout     |
|-------|-----------|------------|----------|
| 12Vdc | 2.2μF/25V | 3.3Vdc     | 10μF/16V |

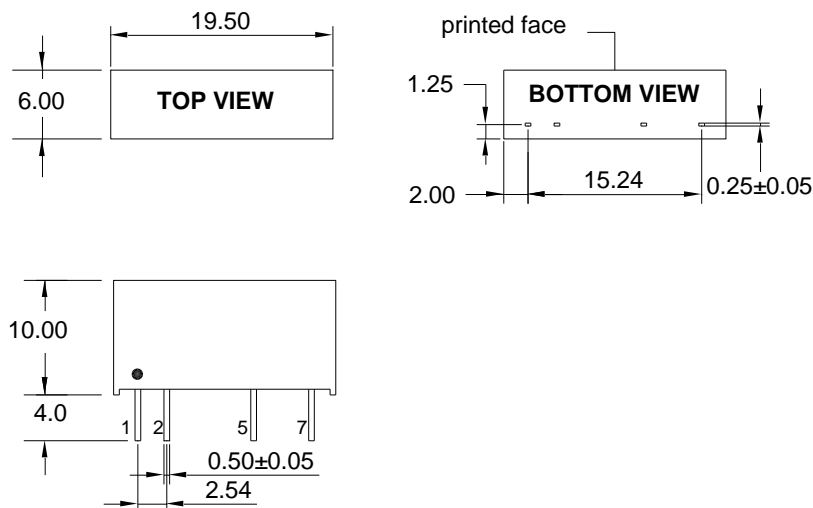
To make sure the product work at perfect operation status with full loading external capacitor is necessary and it is recommended to use high frequency low resistance electrolytic capacitor.

## 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    | 5     | 7     |
|--------|------|------|-------|-------|
| Single | +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

