


**Features**

- 1WATT SMD PACKAGE
- EFFICIENCY TO 85%
- 100% BURNED IN
- UL 94V-0 PACKAGE MATERIAL
- CUSTOM SOLUTIONS AVAILABLE
- REGULATED OUTPUT TYPES



**1 Watt DC/DC Converter**

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

**Input Specifications**

Input Voltage	:24Vdc
Input Voltage Range	:±20%

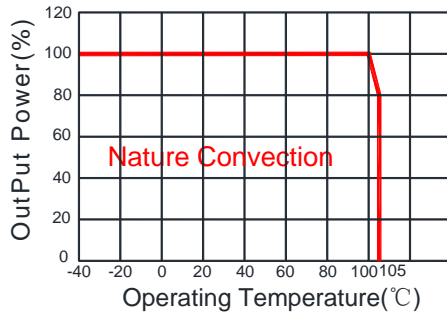
**Output Specifications**

Output Voltage	:24Vdc	
Output Voltage Accuracy	:±5%	@Vout=22.8-25.2Vdc@Vin=24Vdc
Output Current	:42mA	
Efficiency	:85% TYP	
Ripple / Noise	:50mVp-p TYP, 100mVp-p MAX	@20MHz Bandwidth
Short Circuit Protection	: Continuous	
Line Regulation	:±1.2% TYP	@For 1.0% OF Vin
Load Regulation	:5±% TYP, ±10% MAX	@10% to 100% full load
Capacitive Load	:100uF 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	: 1500Vdc	@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	: 1.28g 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

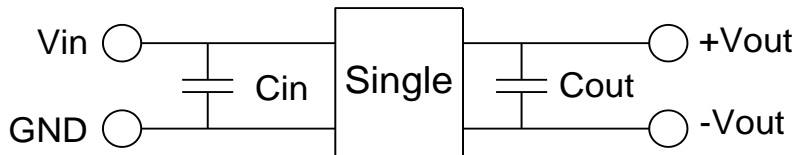


## Part Number

13DSC - 24 S 24 N 3 P  
A B C D E F G

A:Series  
B:Input Voltage  
C: Dual Output  
D: Output Voltage  
E: Unregulated(N)  
F: Package  
G: Protection

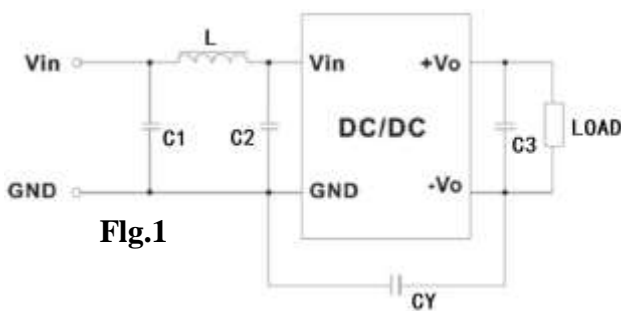
## Recommended Test Circuit



Vin	Cin	Single Vout	Cout
24Vdc	1μF/50V	24Vdc	1μF/50V

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.

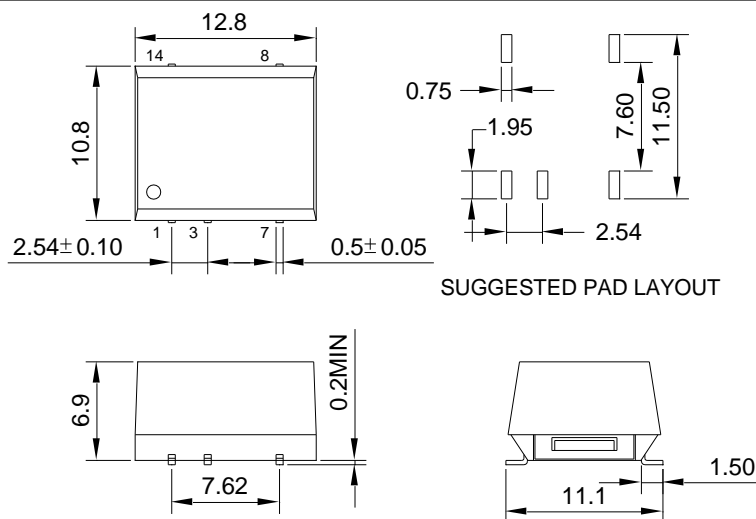
## EMC (CLASS B) compliance circuit



EMC recommended circuit value table

EMI	Component	Value
	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	3	7	8	14
Single	-Vin	+Vin	-Vout	+Vout	NC

## RoHS compliant type

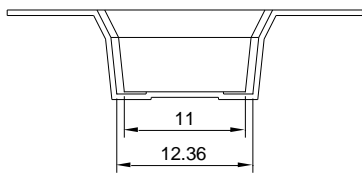
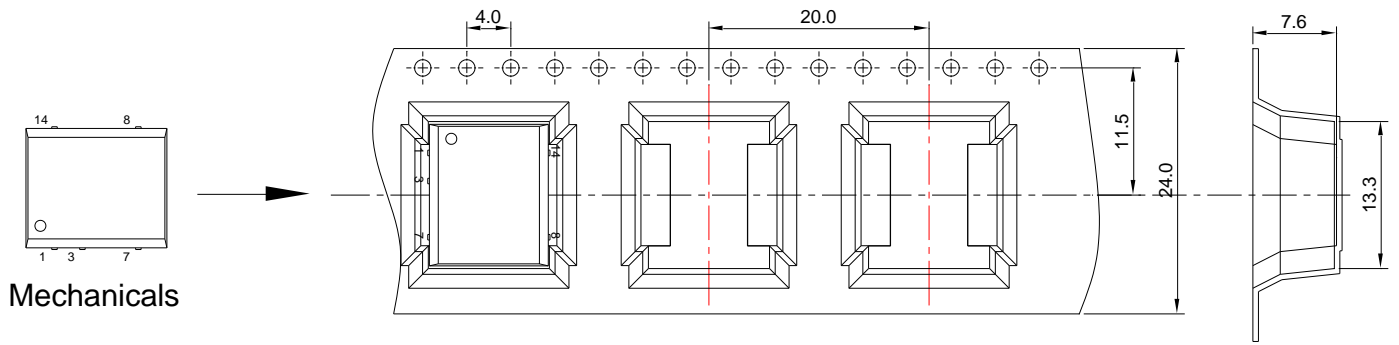
Our RoHS parts just can withstand IR Reflow peak temperature: 240degC +/-5degC as the following profile:

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.

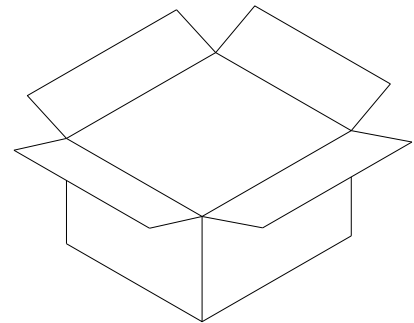
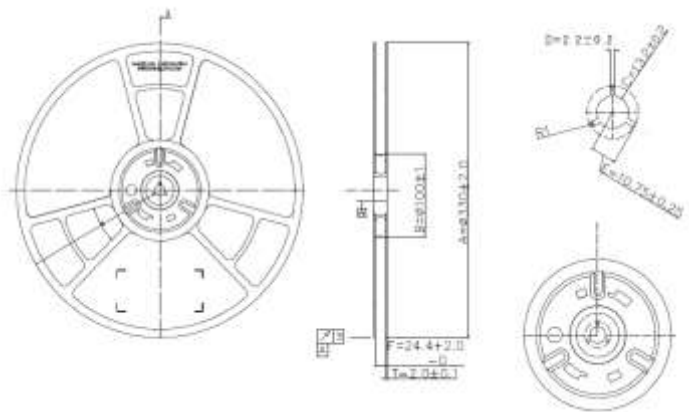


**Packing Information:**

- 1.Weight-----1.28grams/pcs
- 2.Tape & Reel----- 400 pcs
- 3. outer carton unit: 4000pcs/box
- 4. outer carton unit: 10T&R/box
- 5.Weight: 10.5kg per carton



Tape & Reel



Outer carton: 365x365x350mm