

**Features**

- 2WATT SMD PACKAGE
- 2:1 WIDE INPUT VOLTAGES
- EFFICIENCY TO 77%
- 100% BURNED IN
- UL 94V-0 PACKAGE MATERIAL
- CUSTOM SOLUTIONS AVAILABLE
- REGULATED OUTPUT TYPES



**2 Watt DC/DC  
Converter**

WIDE INPUT VOLTAGE RANGE  
2 WATT DC-DC CONVERTER

**Input Specifications**

Input Voltage	:24Vdc
Input Voltage Range	:18-36Vdc

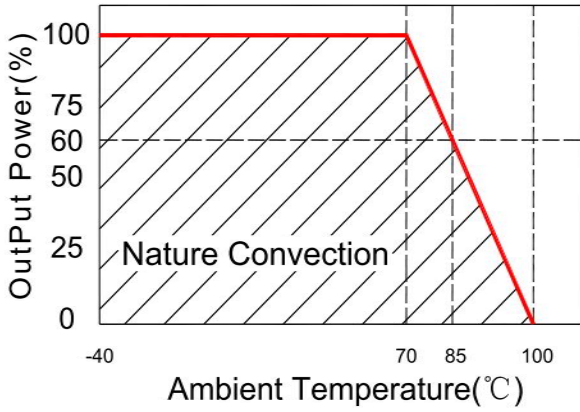
**Output Specifications**

Output Voltage	:5Vdc	
Output Voltage Accuracy	:±2%	@Vout=4.9-5.1Vdc@Vin=18-36Vdc
Output Current	:400mA	
Efficiency	:77% TYP	
Ripple / Noise	:100mVp-p MAX	@20MHz Bandwidth
Short Circuit Protection	:Continuous	
Line Regulation	:±0.5% MAX	@ LL to HL at Full Load
Load Regulation	:±0.8% MAX	@ 0% to 100%FL

**General Specifications**

Operating Temperature Range	: -40°C ~ +85°C	
Storage Temperature	: -40°C ~ +125°C	
Switching Frequency	: 100KHz TYP	
Humidity	: 95% MAX	
Isolation Voltage	: 1500Vdc	@ Input to Output ( 60sec/0.5mA )
Isolation Resistance	: 1000MΩ MIN	@ 500Vdc
Cooling	: Free air convection	
MTBF	: >1000000 Hours	MIL-HDBK-217F@25°C, Ground Benign.
Case Material	: DAP	
Weight	: 3.9g TYP	

**Temperature Derating Graph**

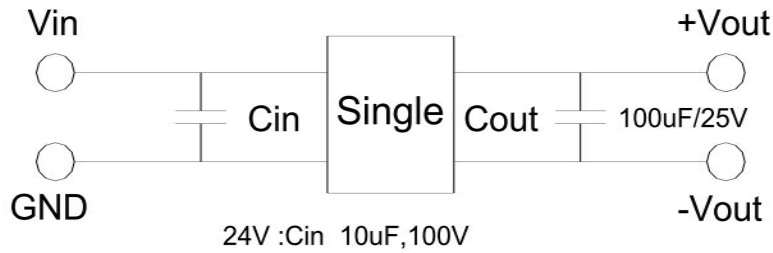


**Part Number**

28D - 24 S 05 R  
 A B C D E

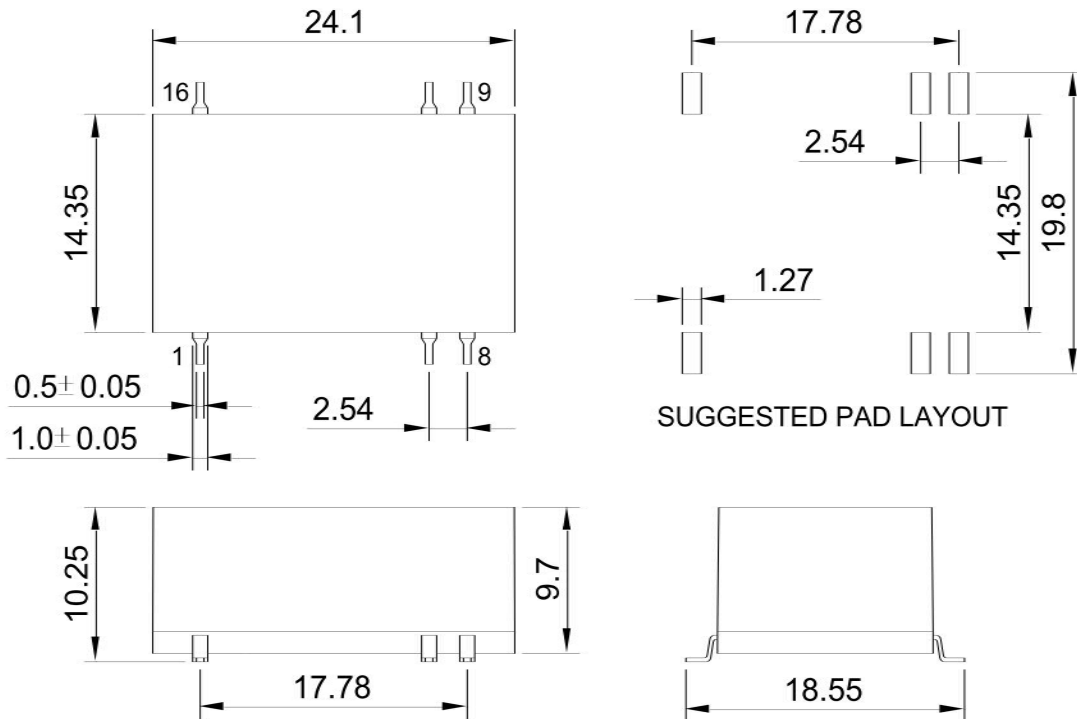
A:Series  
 B:Input Voltage  
 C:Single Output  
 D:Output Voltage  
 E:Regulated(R)

**Recommended Test Circuit**



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**



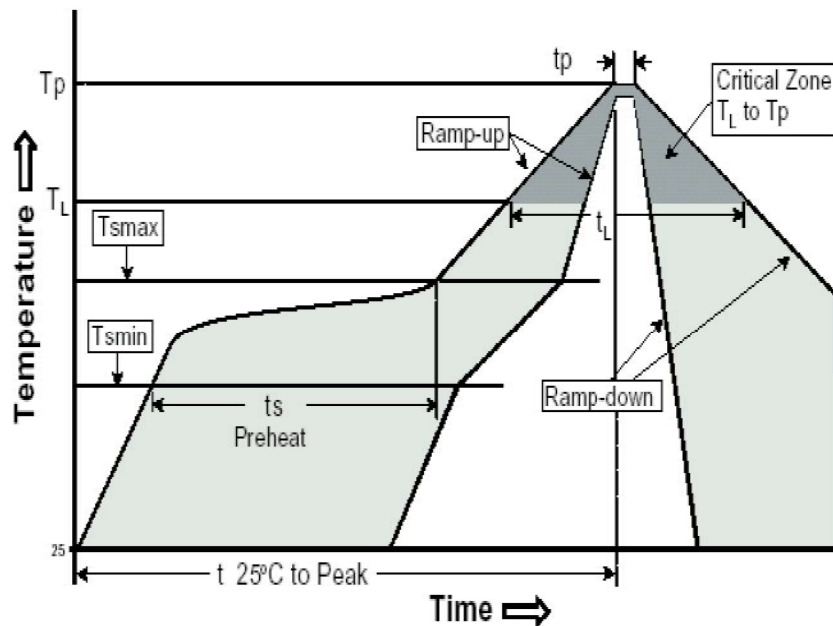
**UNIT:mm Unless otherwise specified,all tolerances are ±0.25**

<b>PIN</b>	1	7	8	9	10	16
<b>Single</b>	-Vin	NC	NC	+Vout	-Vout	+Vin

## RoHS compliant type

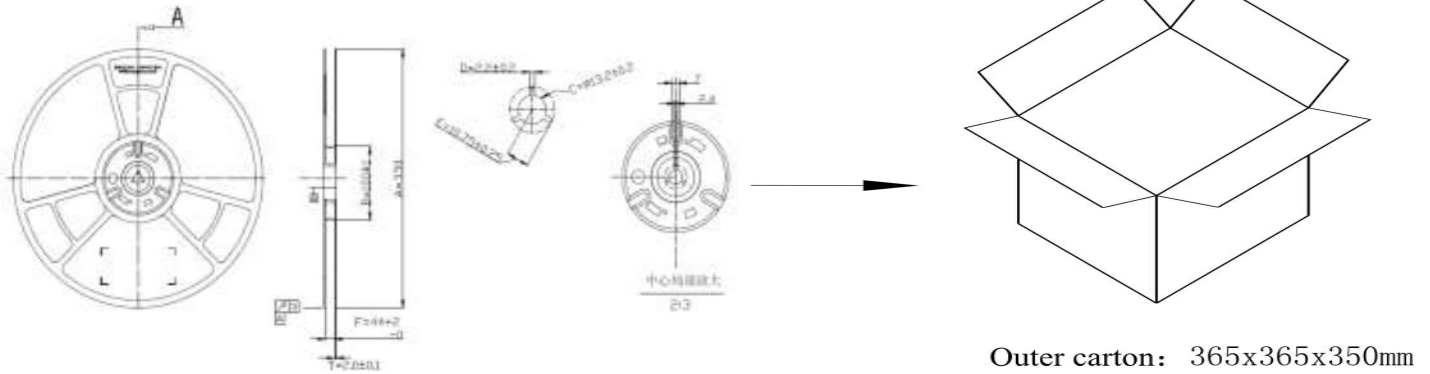
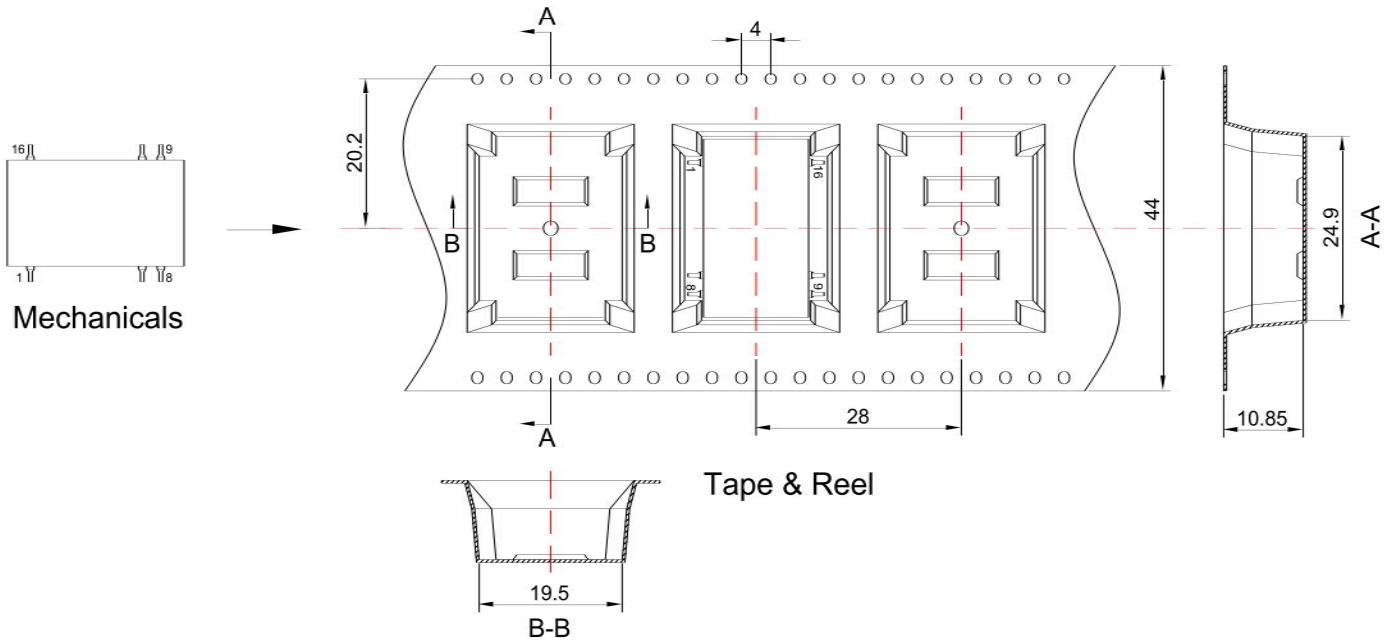
Our RoHS parts just can withstand IR Reflow peak temperature: 240degC +/-5degC as the following profile:

Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate ( $T_{s\ max}$ to $T_p$ )	3 <sup>0</sup> C /second max.
<b>Preheat</b> -Temperature Min ( $T_{s\ min}$ ) -Temperature Max ( $T_{s\ max}$ ) -Time ( $t_{s\ min}$ to $t_{s\ max}$ )	150 <sup>0</sup> C 200 <sup>0</sup> C 60-180 seconds
<b>Time maintained above:</b> -Temperature ( $T_L$ ) -Time ( $t_L$ )	217 <sup>0</sup> C 60-150 seconds
Peak/Classification Temperature ( $T_p$ )	240±5 <sup>0</sup> C
Time within 5 <sup>0</sup> C of actual Peak Temperature ( $t_p$ )	20-40 seconds
Ramp-Down Rate	6 <sup>0</sup> C/seconds max
Time 25 <sup>0</sup> C to Peak Temperature	6 minutes max.



### Packing Information:

1. Weight-----3.9 grams/pcs
2. Tape & Reel----- 200pcs
3. outer carton unit: 1200pcs/box
4. outer carton unit: 6T&R/box
5. Weight: 7.8kg per carton

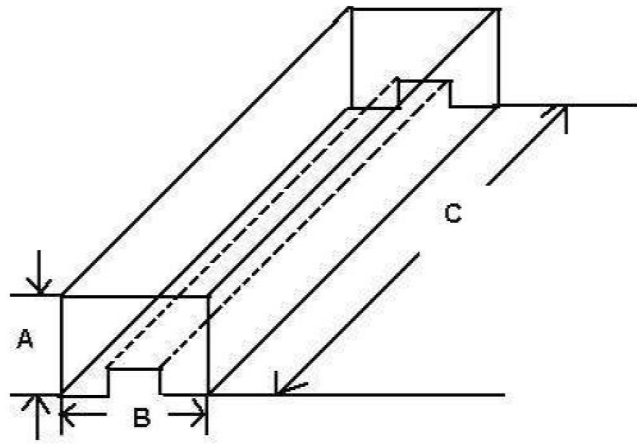


**Packing Information:**

Weight----- 3.9 grams/pcs

TUBE----- 20pcs

Weight: 112.3g per tube



UNIT:mm

Size(mm)		
A	B	C
18.0	20.0	520

Outer carton unit: 1440pcs/72Tube/box

Weight: 8.2kg per carton

