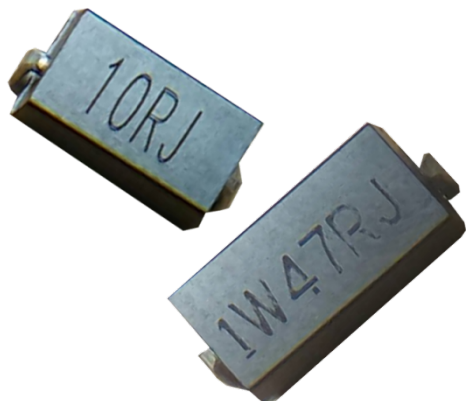


## 模压绕线电阻器

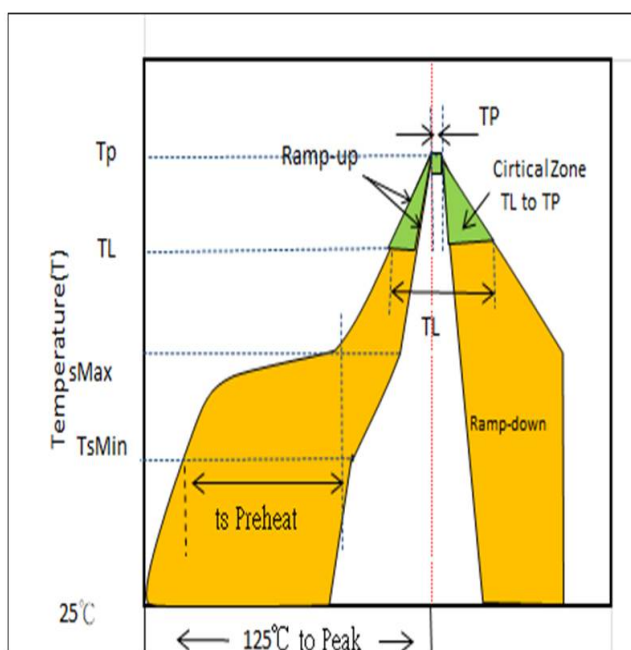
### SMW 系列



### ■应用 / APPLICATIONS

- ※通讯器材。
- ※医疗电子设备。
- ※测试量测设备。
- ※汽车电子。
- ※工业产品。
- ※LED 灯熔断保险丝。
- ※Telecommunication
- ※Medical equipment
- ※Measurement/Testing Equipment
- ※Automotive
- ※Industrial
- ※LED Lamp Fusible Resistor

### ■焊接曲线



## Wire Wound Chip Resistor SMW Series

### ■特性/FEATURES

- ※小型化能高密度插装。
- ※功率范围可达2W以上。
- ※耐热性佳，表面温升高。
- ※符合无铅（Pb）和含铅焊接工艺要求。
- ※可用于自动表面贴装(SMD)装配系统。它们适于通过回流焊、波峰焊进行自动焊接。
- ※Small size are good for high density application
- ※High power rating up to 2Watts
- ※High thermal stability and low surface temperature rise
- ※Compatible with lead (Pb)-free and lead containing soldering processes
- ※The resistors are suitable for processing on automatic SMD assembly systems.

### ■焊接参数

Profile Feature	Lead-Free Assembly
Average Ramp-up Rate	3°C/second
(T <sub>SMax</sub> to T <sub>p</sub> ) Average	max
Preheat	
■Temperature Min (T <sub>SMin</sub> )	150°C
■Temperature Max (T <sub>SMax</sub> )	200°C
■Time (t <sub>s</sub> Preheat)	60-180 seconds
Time maintained above:	
■Temperature (T <sub>L</sub> )	217°C
■Time (t <sub>L</sub> )	60-150 seconds
Peak/Classification Temperature	
■Temperature (T <sub>p</sub> )	260 <sup>+0.5</sup> °C
Time within 5°C of actual peak	
Time (T <sub>p</sub> )	20-40 seconds
Time 25°C to peak Temperature	8 minutes max
Do not exceed	280°C

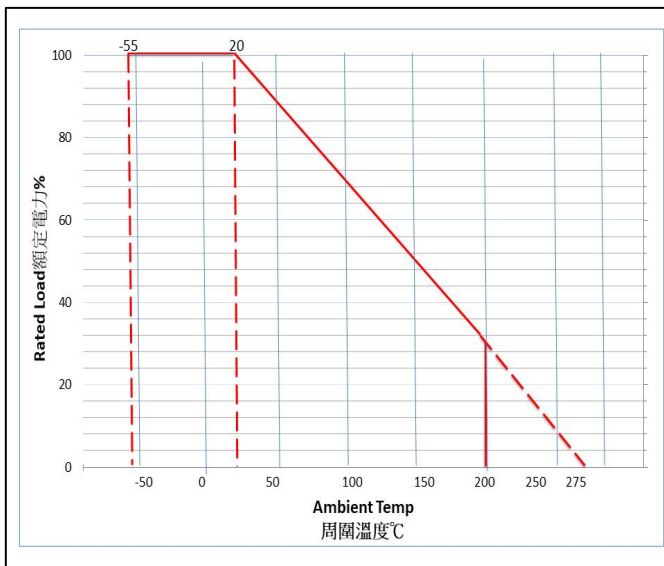
## ■ 部件编号和产品描述/Part Number And Product Description

### SMW 1W 10Ω J

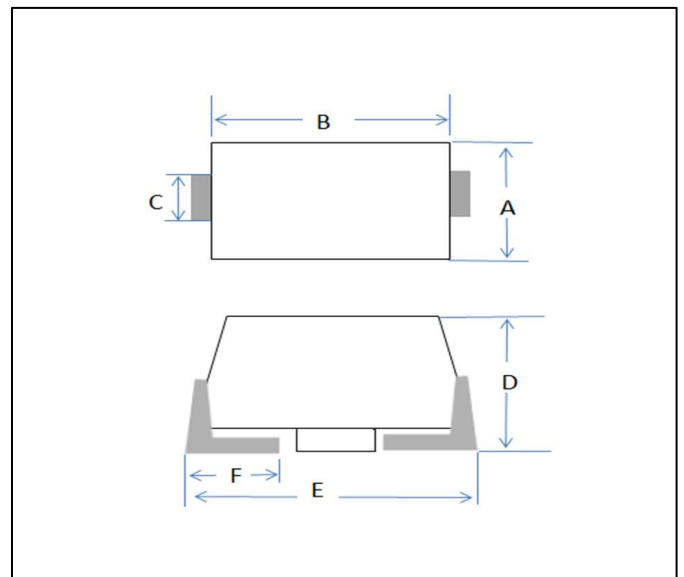
a b c d

- a: 种类: 模压绕线电阻 "SMW"  
 Type: Fusible Wire Wound Chip Resistor "SMW"
- b: 标称功率: 单位为瓦(W)  
 Rated Wattage: Shown by "W" such as "1W"
- c: 标称电阻值: 10Ω  
 Nominal Resistance: 10Ω
- d: 容许误差: F=±1%, G=±2%, J=±5%  
 Tolerance: F=±1%, G=±2%, J=±5%

## ■ 功耗-温度曲线/Dreading Curve



## ■ 外型尺寸/Construction



unit: mm

Rated Wattage	A±0.3	B±0.3	C±0.3	D±0.3	E Max	F±0.3
1/2W	2.6	4.0	1.4	2.1	5.7	1.3
1W	3.8	6.5	1.4	3.0	7.5	1.3
2W	4.2	8.6	1.4	3.5	9.6	1.8
3W	5.5	10.5	1.7	5.0	12	2.3
5W	7.3	13.5	1.7	6.8	17	2.5

## ■ 标准品技术规格/Standard Electrical Specifications

Item Type	标称功率 at 70°C	工作温度 范围	最大工作电压	雷击性能 1.2/50 $\mu$ s 10 Hit	电阻值范围
					$\pm 1.0\%$ 、 $\pm 2.0\%$ 、 $\pm 5.0\%$
SMW 1/2W	1/2W	-55 ~175°C	300V	>1,000V	0.1 $\Omega$ ~100 $\Omega$
SMW 1W	1W	-55 ~175°C	300V	>1,000V	0.1 $\Omega$ ~100 $\Omega$
SMW 2W	2W	-55 ~175°C	300V	>1,000V	0.1 $\Omega$ ~100 $\Omega$
SMW 3W	3W	-55 ~175°C	300V	>1,000V	0.1 $\Omega$ ~100 $\Omega$
SMW 5W	5W	-55 ~175°C	300V	>1,000V	0.1 $\Omega$ ~100 $\Omega$

## ■ 测试步骤和要求/ Environmental Characteristics

测试项目/ Item	测试要求/Requirement	测试步骤/ Test Method
电阻温度系数试验 Temperature coefficient	$\pm 300$ PPM/°C.	-55°C~+125°C, 25°C is the reference temperature.
短时间过负载试验 Short Time Overload	$\leq \pm(1\%+0.05\Omega)$	RCWV* $\times 2.5$ Times or Max. Overload voltage for 5 seconds.
耐湿负载试验 Damp Heat with Load	$\leq \pm(2.0\%+0.05\Omega)$	40 $\pm 2$ °C, 90~95% R.H. Max. Working voltage for 1,000 hrs. with 1.5 hrs. "ON" and 0.5 hrs. "OFF".
寿命负载试验 Endurance	$\leq \pm(2.0\%+0.05\Omega)$	70 $\pm 2$ °C, Max. Working voltage for 1,000 hrs. with 1.5 hrs. "ON" and 0.5 hrs. "OFF".
弯曲端子强度试验 Bending Strength	$\leq \pm(0.5\%+0.05\Omega)$	Bending once for 5 seconds with 2mm.
焊锡性试验 Solder ability	$\cong 95\%$ min. coverage	245 $\pm 5$ °C for 3 seconds.
焊锡耐热性试验 Resistance to soldering heat	No evidence of mechanical damage $\leq (\pm 1\%+0.05\Omega)$	260 $\pm 5$ °C for 10 seconds
绝缘耐压试验 Voltage Proof	No breakdown or flashover	AC 500V for 1 minute.
绝缘电阻试验 Insulation Resistance	>1,000M $\Omega$	DC 500V Meg Meter.

※RCWV (Rated Continuous Working Voltage)

※Operating Voltage(RCWV) = $\sqrt{P \times R}$  or Max. Operating voltage listed above, whichever is lower。

工作电压=(电阻额定功率 $\times$ 公称电阻值)开根号或法定最高使用电压。

※Overload Voltage=2.5\* $\sqrt{P \times R}$  or Max. Overload voltage listed above, whichever is lower。

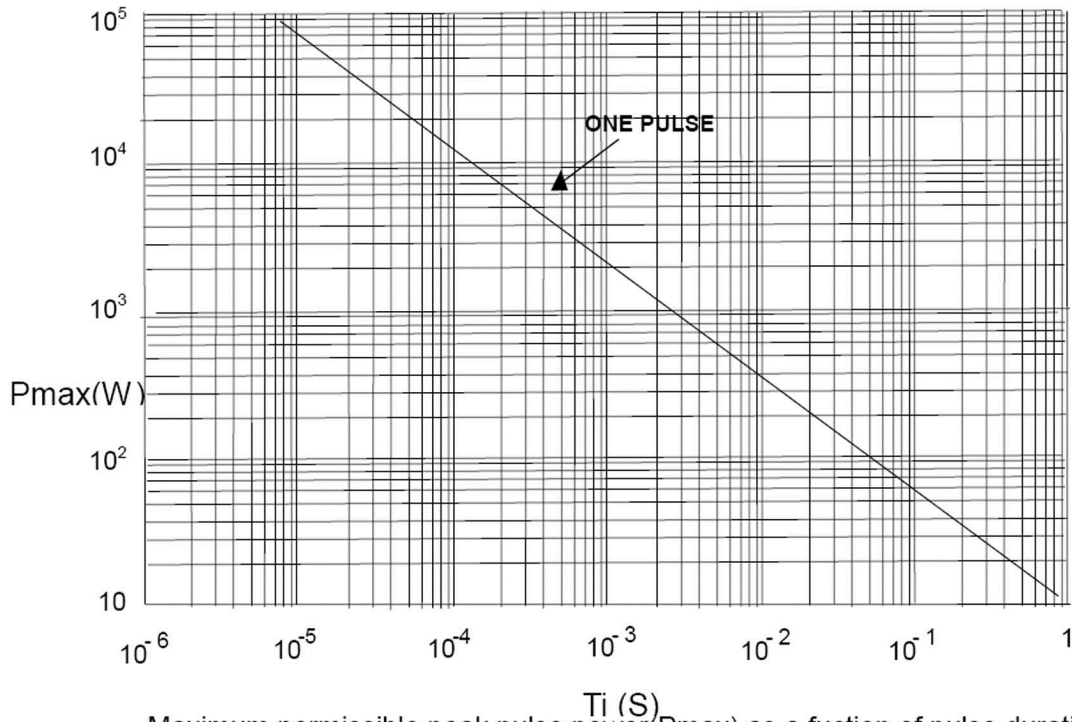
短时间过负荷电压=(电阻额定功率 $\times$ 公称电阻值)开根号 $\times 2.5$  倍或法定最高短时间过负荷电压。

※储存环境条件/ Storage Temperature: 25 $\pm 3$ °C; Humidity < 80% RH。

USED ON \_\_\_\_\_

DWG NO  
—

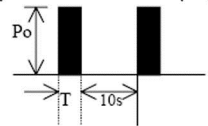
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Maximum permissible peak pulse power( $P_{max}$ ) as a function of pulse duration( $T_i$ )

Condition test: Resistance change  $\leq \pm 5\%$  with pulse 1000 cycles as like the figure.(Reference Only)

1. Added power and added voltage are within the lower territory of this graph.
2. Added in normal temperature and humidity.



LOC  
—

DIST  
—

					DWN —	CHK —	APVD —	
					DIMENSIONS: INCHES		MATERIAL —	HT TR —
					TOLERANCES UNLESS		<b>Thunder Components LTD.</b>	
								NAME
P	LTR	REVISION RECORD	DATE	DWN	APVD	0 PLC $\pm$ — 1 PLC $\pm$ — 2 PLC $\pm$ — 3 PLC $\pm$ — 4 PLC $\pm$ — ANGLES $\pm$ —		
THIS DRAWING IS A CONTROLLED DOCUMENT.					SURFACE TEXTURE —√—		<b>SMW 2W - Pulse Characteristics</b>	
					SCALE 1:1	SIZE A4	DRAWING NO —	SHEET 1 OF 1
							REV —	