

METAL GLAZE HIGH VOLTAGE CHIP RESISTORS, ANTI-SULFURATION

耐硫化金屬釉高壓封裝電阻器



Features

1. Flameproof UL94V0 molded package, resistant to sulfuration, heat and humidity.
2. Special design for automatic surface mounting.
3. Metal-glaze elements provide high stable performance against environmental conditions and overload.
4. Ultra high surge withstanding & pulse withstanding performance.
5. Excellent mechanical strength & electrical stability.
6. Reducing assembly costs.

特色

1. 不燃性樹脂封裝成型，具高耐硫化、耐溫、及耐濕特性。
2. 特殊設計，專供自動表面黏著作業。
3. 使用高穩定性金屬釉作基體，耐溫度及超負載，性能安定。
4. 超高耐雷擊及耐脈衝特性。
5. 高安定性及信賴性。
6. 降低裝配費用。

ELECTRICAL AND MECHANICAL PERFORMANCE

電氣及機械特性

特性 Characteristics	規格值 Standards	試驗方法 Test Methods
阻值容許誤差 Resistance Tolerance	±5%(J) or ±1%(F)	-
溫度係數 Resistance Temp. Coeff.	±200ppm / °C	-65°C ~ 200°C
額定負載 Power Rating Load	Surface Temp. 275°C Max. 最高表面溫度 275°C $\Delta R/R \leq \pm 1\%$	Rated voltage for 30 minutes 額定電壓 / 30 分鐘
短時間過負載 Short Time Overload	±1%	2.5 times of rated voltage for 5 sec. 2.5 倍額定電壓/5 秒
耐電壓 Dielectric Withstanding Voltage	No evidence of mechanical damage or insulation breakdown 無機械性能損壞及絕緣擊穿現象	AC 1000V for 1min. 施加 AC 1000V 電壓 1 分鐘
絕緣電阻 Insulation Resistance	10,000 MΩ	DC 500V megger
耐脈衝 Pulse Loading Capability	$\Delta R/R \leq \pm 2\%$	IEC 60065 14.1
焊錫性 Solder-ability	Minimum 95% coverage 焊錫面積 $\geq 95\%$	235°C ± 5°C for 2seconds
浸錫耐熱性 Resistance to Soldering Heat	No evidence of mechanical damage. 無機械性能損壞現象, $\Delta R/R \leq \pm 1\%$	270 ± 5°C for 10 ± 1 seconds

ENVIRONMENTAL CHARACTERISTICS

耐環境特性

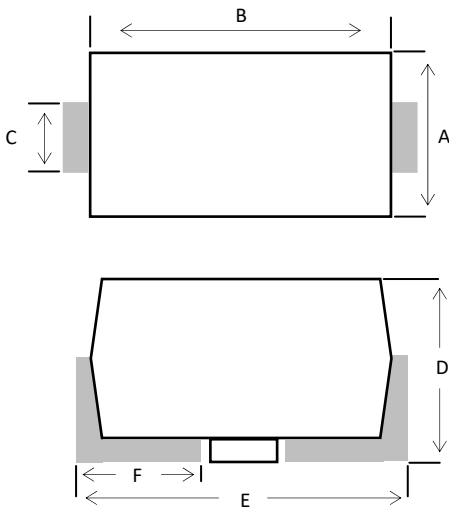
特性 Characteristics	規格值 Standards	試驗方法 Test Methods
溫度週率 Temp. Cycle	$\Delta R/R \leq \pm 2\%$	-65°C(30mins) → Room Temp.(3mins) → +275°C(30mins) → Room Temp.(3mins) / (5 cycles)
負載壽命 Load Life	$\Delta R/R \leq \pm 5\%$	Rated power load 90 minutes ON 30minutes OFF 70°C 1000hours
耐濕壽命 Moisture-proof Load Life	$\Delta R/R \leq \pm 5\%$	Rated power load 90 minutes ON 30minutes OFF 40°C 95%RH 1000hours

※參考規格 Reference Standards

JIS C 5201

Dimensions

尺寸



Unit : mm

Rated Wattage	A ± 0.3	B ± 0.3	C ± 0.3	D ± 0.3	E max.	F ± 0.3	Resistance Range (Ω)	Max. Working Voltage	
								DC	RMS
1WL	4.0	6.7	1.4	3.55	7.9	1.5	100K~10M	1600V	1150V
2WL	5.5	10.5	1.7	5.0	12	2.3	100K~10M	3500V	2500V
3WL	7.3	13.5	1.7	6.8	17	2.5	100K~10M	5000V	3500V

Note : Too low or too high ohmic values can be supplied only case by case.

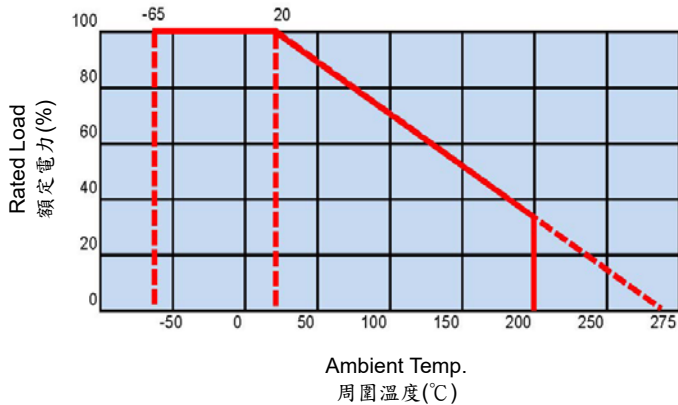
Rated Continuous Working Voltage (RCWV) shall be determined from

$RCWV = \sqrt{\text{Rated Power} \times \text{Resistance Value}}$ or Max. Permissible Voltage listed above, whichever less.

Derating Curve

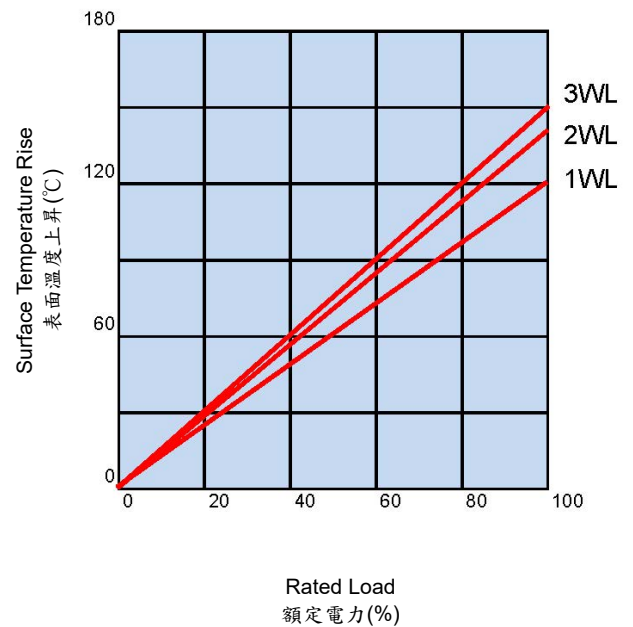
電力輕減曲線

For resistors operated in ambient temperatures above 20°C, power rating must be derated in accordance with the curve below.



Surface Temperature Rise

表面溫度上昇曲線

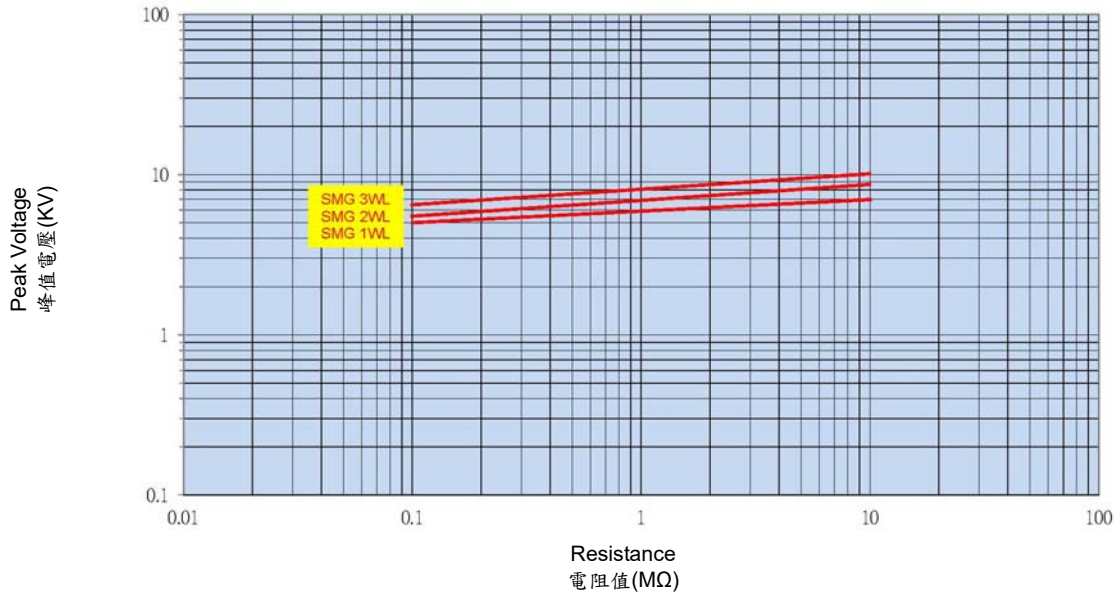


Lightning Surge

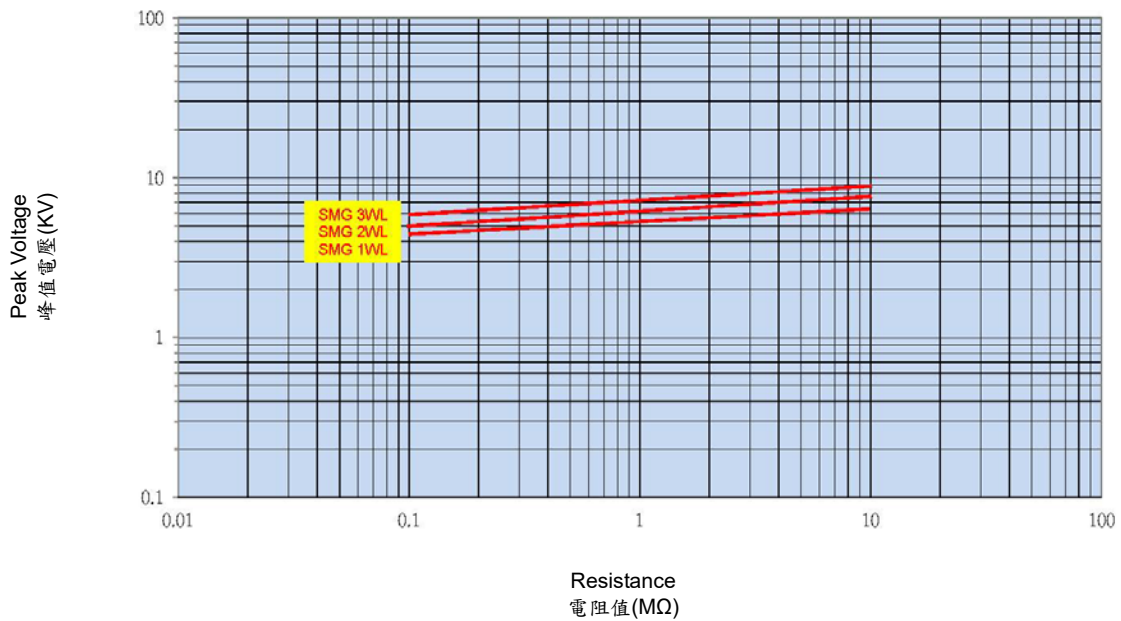
雷擊特性曲線

The resistors are designed to withstand $1.2/50 \mu\text{s}$ pulse & $10/700 \mu\text{s}$ according to ICE61000-4-5 · 30 pulse per voltage, 30 seconds between each pulse. The resistance value change rate between pre-and-post test shall be within $\pm 5\%$

1.2/50 μs Lightning Surge



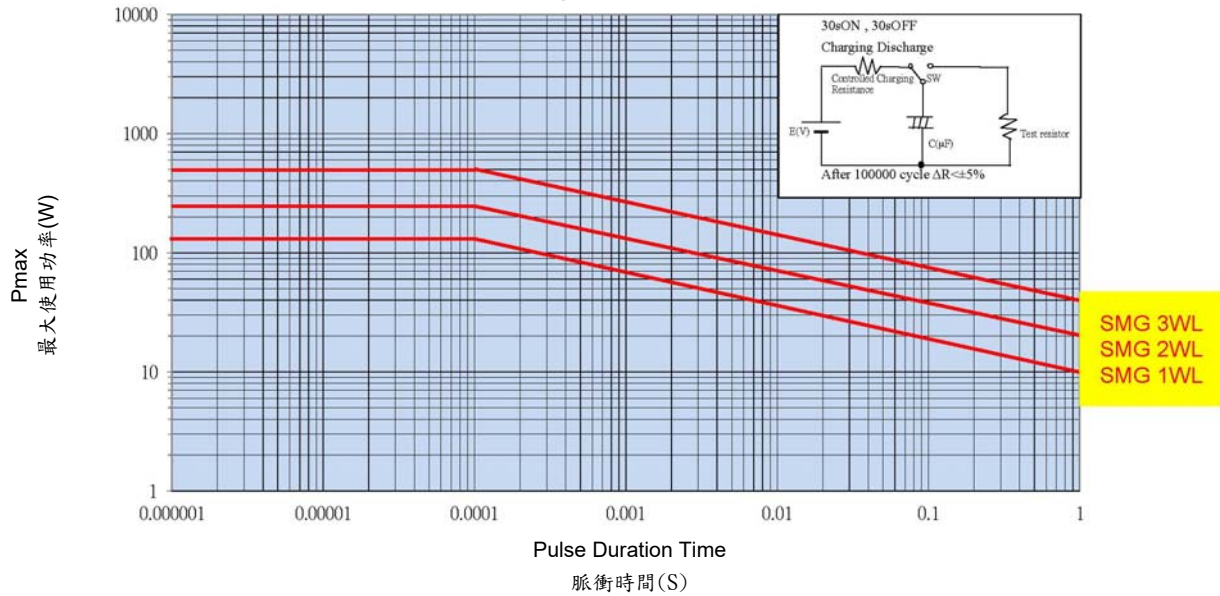
10/700 μs Lightning Surge



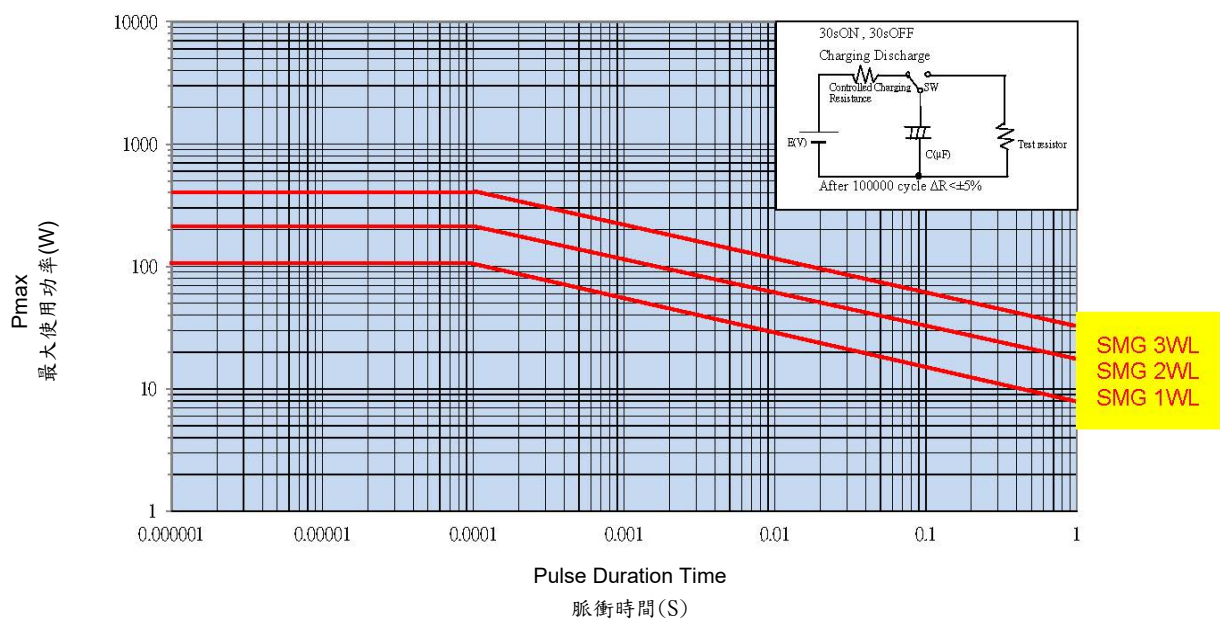
Pulse Characteristics

脈衝特性曲線

Single Pulse



Continuous Pulse



How to order

(訂貨方式)

It is composed by Type, Rated Wattage, Nominal Resistance and Tolerance.

SMG

a.

2WL

b.

1M

c.

J

d.

a. : Type (種類) : Metal Glaze High Voltage Chip Resistors are called "SMG".

b. : Rated Wattage (額定電力) : Shown by "W", such as 1WL, 2WL, 3WL.

c. : Nominal Resistance (公稱電阻值) : 1MΩ.

d. : Tolerance (容許誤差) : F=±1%, J=±5%.