

## THICK FILM CHIP RESISTORS

### 厚膜晶片電阻器



#### Features

1. Miniature size can compact P.C. Board,
2. 8mm tape carrier packaging available for automatic surface mounting.
3. Excellent mechanical strength and electrical stability.
4. Reducing assembly costs.

#### 特色

1. 小型化適用於高精密電子產品之小型基板。
2. 8mm帶裝方式適用於自動表面黏著。
3. 具有高強度安定性和高信賴性。
4. 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	$\pm 5\%$ (J) or $\pm 1\%$ (F)	-
溫度係數 Resistance Temp. Coeff.	<10 $\Omega$ : $\pm 400\text{ppm}/^\circ\text{C}$ 10 $\Omega$ ~1M $\Omega$ : $\pm 100\text{ppm}/^\circ\text{C}$ >1M $\Omega$ : $\pm 200\text{ppm}/^\circ\text{C}$	-55 $^\circ\text{C}$ ~ 155 $^\circ\text{C}$
額定負載 Power Rating Load	Surface temp 155 $^\circ\text{C}$ Max. 最高表面溫度 155 $^\circ\text{C}$ , $\Delta R/R \leq \pm 1\%$	Rated voltage for 30 minutes 額定電壓 / 30分鐘
短時間過負載 Short Time Overload	$\pm 1\%$	2.5 times of rated voltage for 5 seconds. 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	Max. Overload Voltage for 1 min. 施加最高過負載電壓 1 分鐘
絕緣電阻 Insulation Resistance	1,000M $\Omega$	DC 100V megger
焊錫性 Solder-ability	Minimum 95% coverage 焊錫面積 $\geq 95\%$	245 $\pm 5^\circ\text{C}$ for 2 seconds
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 $\pm 5^\circ\text{C}$ for 10 $\pm 1$ seconds

## ENVIRONMENTAL CHARACTERISTICS

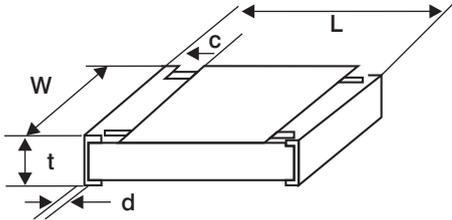
### 耐環境特性

特性 Characteristics	規格值 Standards	試驗方法 Test Methods
溫度週率 Temp. Cycle	$\Delta R/R \leq \pm 0.5\%$	-55 $^\circ\text{C}$ ( 30 min.) $\rightarrow$ Room Temp.( 3 min.) $\rightarrow$ +155 $^\circ\text{C}$ ( 30 min.) $\rightarrow$ Room Temp.( 3 min.) / ( 5 cycles)
負載壽命 Load Life	$\Delta R/R \leq \pm 1\%$	Rated power load 90 minutes ON 30 minutes OFF 70 $^\circ\text{C}$ 1000 hours
耐濕壽命 Moisture-proof Load Life	$\Delta R/R \leq \pm 1\%$	Rated power load 90 minutes ON 30 minutes OFF 40 $^\circ\text{C}$ 95% RH 500 hours

※ 參考規格 Reference Standards  
IEC 60115-8  
JIS C 5201-8

## Dimensions

### 尺寸



Unit : mm

CODE	Rated Wattage	Dimension(mm)					Max. Working Voltage	Resistance Range(Ω)
		L ± 0.2	W ± 0.2	C ± 0.2	d ± 0.2	t ± 0.1		
0402(1005)	1/16W	1.0±0.1	0.5±0.05	0.2±0.1	0.25±0.1	0.35±0.05	50V	1~10M
0603(1608)	1/10W	1.6	0.8	0.3	0.3	0.45	50V	1~10M
0805(2012)	1/8W	2.0	1.25	0.4	0.4	0.5	150V	1~10M
1206(3216)	1/4W	3.2	1.6	0.5	0.5	0.6	200V	1~10M
2010(5025)	1/2W	5.0	2.5	0.6	0.5	0.6	200V	1~10M
2512(6332)	1W	6.3	3.2	0.6	0.5	0.6	200V	1~10M

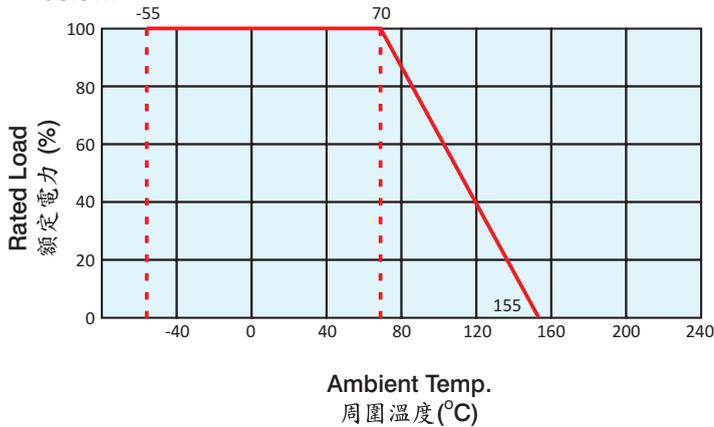
- Note:** 1. Max. Overload Voltage is 2 times of Max. Working Voltage  
 2. Zero ohm is also supplied ( 50 mΩ Max.)  
 3. Too low or too high ohmic values can be supplied only case by case.

Rate Continuous Working Voltage ( RCWV ) shall be determined  
 $\sqrt{\text{Rated Power} \times \text{Resistance Value}}$  or Max. Working Voltage listed above,  
 whichever less.

## Derating Curve

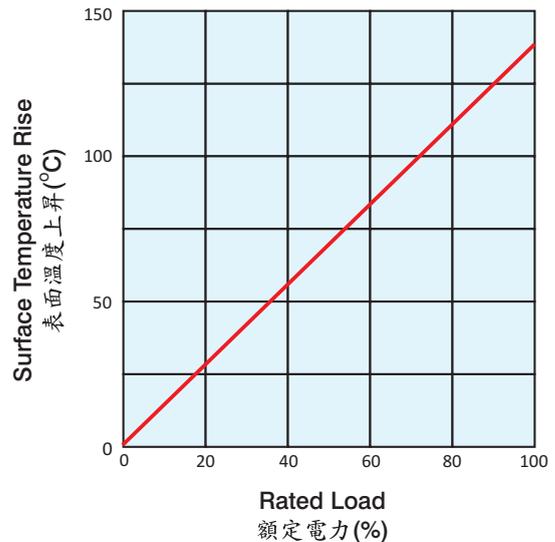
### 電力輕減曲線

For resistors operated in ambient temperatures above 70°C, power rating must be derated in accordance with the curve below.



## Surface Temperature Rise

### 表面溫度上昇曲線



## How to order

### 訂貨方式

It is composed by Type, Code Number, Nominal Resistance, Tolerance, Terminal Surface Material. e.g.

RMC   0603   1K   5%   N  
 a.        b.        c.        d.        e.

- a. : Type(種類): Thick Film Chip Resistors are called "RMC".
- b. : Code Number(代號): There are 0402, 0603, 0805, 1206, 2010, 2512.
- c. : Nominal Resistance(公稱電阻值) : 1K.
- d. : Tolerance(容許誤差): ±5% .
- e. : Terminal Surface Material(端電極表面材質) : N (RoHS Compliant)

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