

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 Ω : $\pm 400\text{ppm}/^\circ\text{C}$ 10 Ω ~1M Ω : $\pm 100\text{ppm}/^\circ\text{C}$ >1M Ω : $\pm 200\text{ppm}/^\circ\text{C}$ | -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 Ω | 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 ± 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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