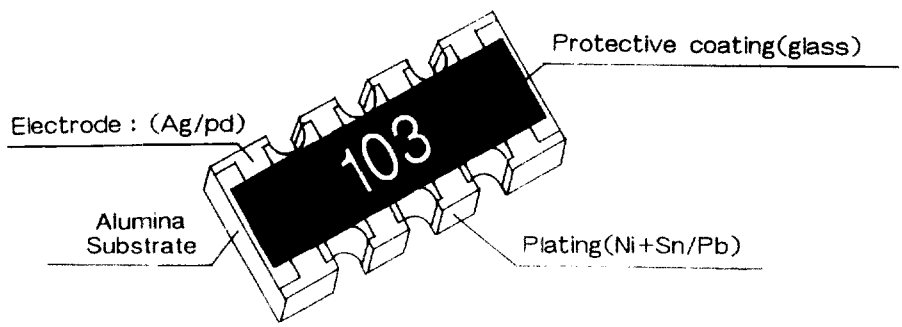
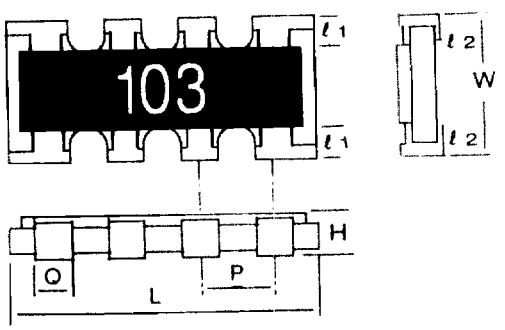
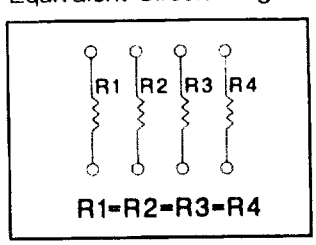
ROYAL OHM

Chip Resistors Array





Equivalent Circuit Diagram



Dimension (mm)

H4WG	RMC4D03 (0603)	3.2 ± 0.2	1.6 ± 0.2	0.5 ± 0.1	0.3 ± 0.15	0.3 ± 0.15	0.8 ± 0.1	0.5 ± 0.15

Rating

H4WG	RMC4D03 (0603)	1/16W	50V	100V	-55℃ ~ +125℃	100Ω ~ 560KΩ	10Ω ~ 1MΩ	1A

ROYAL OHM

Chip Resistors Array

Performance Specifications

Temperature coefficient JIS - C - 5202 5.2	Natural resistance change per temp. degree centigrade $\frac{R_2 - R_1}{R_1(t_2-t_1)} \times 10^6$ (PPM / °C) R_1 : Resistance value at room temperature (t_1) R_2 : Resistance value at room temp. plus 100 °C (t_2) Test Pattern : Room temp., Room temp.+100 °C	± 5% 10Ω --- 10MΩ ≤ ±400PPM ± 1% 100Ω --- 560KΩ ≤ ±200PPM
Short - time overload JIS - C - 5202 5.5	Permanent resistance change after the application of a potential of 2.5 times RCWV for 5 seconds.	±(2.0% + 0.1Ω) Max.
Insulation resistance JIS - C - 5202 5.6	Apply 500V DC between protective coating and termination for 1 min., then measure.	1,000 Megaohm or more
Dielectric withstanding voltage JIS - C - 5202 5.7	Apply 500V AC between protective coating and termination for 1 minute.	No evidence of flashover mechanical damage, arcing or insulation break down
Terminal bending JIS - C - 5202 6.1.4	Twist of Test Board : Y / X = 5 / 90mm for 10 seconds	± (1.0% + 0.05Ω) Max.
Soldering Heat JIS - C - 5202 6.4	Dip the resistor into a solder bath having a temperature of 260 ± 5 °C and hold it for 10 ± 1 seconds	Resistance change rate is ± (1.0% + 0.05Ω) Max.
Solderability JIS - C - 5202 6.5	Test temperature of solder 235 °C ± 5 ° Dipping them in solder : 3 ± 0.5 seconds	95% coverage Min.
Temperature cycling JIS - C - 5202 7.4	Resistance change after continuous five cycles for duty cycle specified below :	Resistance change rate is ± (1.0% + 0.05Ω) Max.
Load life in humidity JIS - C - 5202 7.9	Resistance change after 1,000 hours (1.5 hours "on", 0.5 hour "off") at RCWV in a humidity chamber controlled at 40 °C ± 2 °C and 90 to 95% relative humidity.	± (3.0% + 0.1Ω) Max.
Load Life JIS - C - 5202 7.10	Permanent resistance change after 1,000 hours operating at RCWV, with duty cycle 1.5 hours "on", 0.5 hour "off" at 70 °C ± 2 °C ambient	± (3.0% + 0.1Ω) Max.

Step	Temperature	Time
1	−55 °C ± 3 °C	30 mins
2	Room temp.	10 - 15 mins
3	+125 °C ± 2 °C	30 mins
4	Room temp.	10 - 15 mins

*RCWV = Rated Continuous Working Voltage = $\sqrt{\text{Rated Power} \times \text{Resistance Value}}$

Marking

1) ± 5% Tolerance : The first two digits are significant of resistance and the third one denotes number of zeros following:

Example: 273 → 27000 → 27 KΩ

2) Below 10 Ω shown as following:

Example: 4R7 → 4.7 Ω

3) ± 1% Tolerance : 4 digits, The first three are significant, the fourth digit is number of zeros. Letter R is decimal point.

Example : 3901 → 3900 → 3.9 KΩ

4R99 → 4.99 Ω

4) For E- 96 Series (± 1% - F Tolerance) in 0603 size