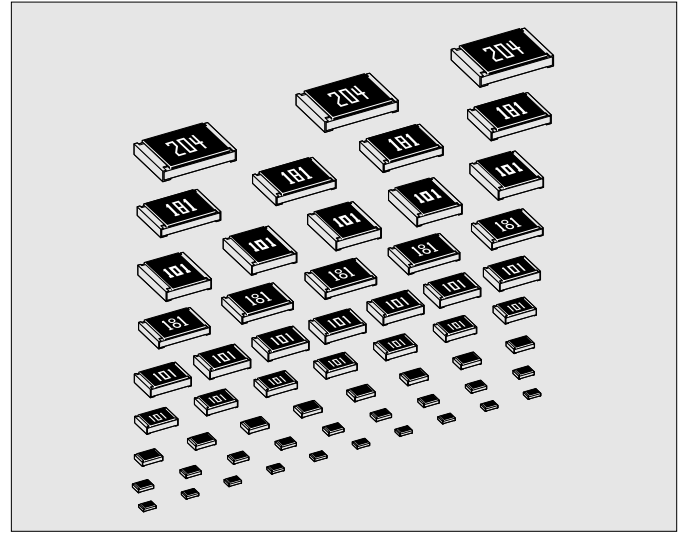


# RMC

## ●Features

- 01005 to 2512 inch size and Jumper chip available.
- 0.1W is available for 0402 inch (RMC1/16S).
- Precise dimension by Laser-scriber method (RMC1/20, RMC1/32).
- Press Pocket Taping package (RMC1/20, RMC1/32).
- Walsin Technology Corporation OEM products (1206 to 0402 inch) are also available.
- Halogen\*<sup>1</sup> and Antimony\*<sup>2</sup> free product  
\*<sup>1</sup> Cl or Br ≤ 900ppm, Cl+Br ≤ 1500ppm  
\*<sup>2</sup> Sb<sub>2</sub>O<sub>3</sub> ≤ 900ppm
- Stability Class : 5%



## ●Dimensions



Rated resistance value marking is 3-digit on the over coating except RMC1/16S & RMC1/20 & RMC1/32.  
4-digit marking is available for F & G tolerance except RMC1/16, RMC1/16S & RMC1/20 & RMC1/32 type.

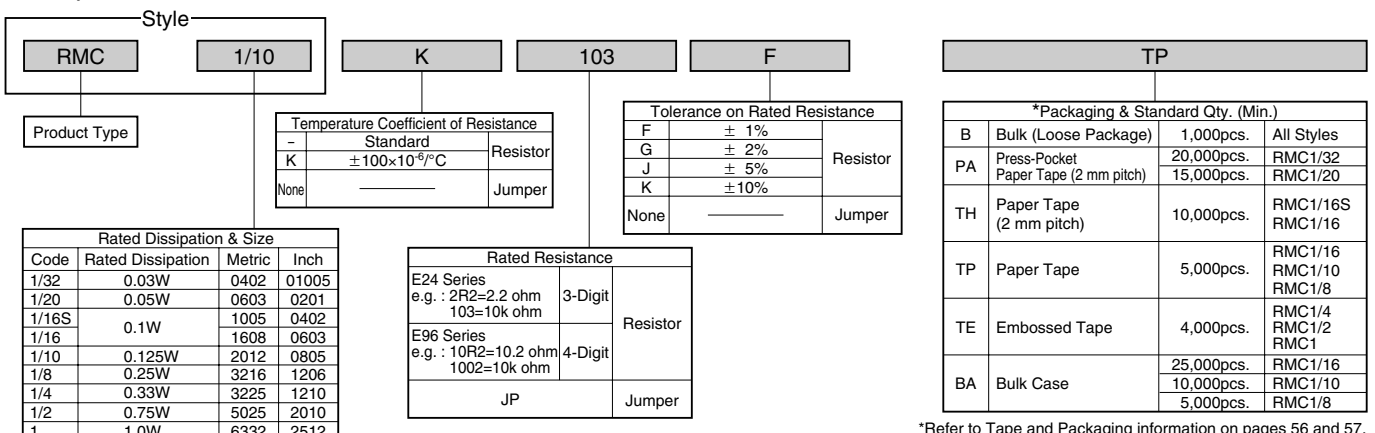
Unit : mm

| Style    | Metric | Inch  | Product | L          | W                                     | H           | c           | d                                      | *Unit weight/pc. |
|----------|--------|-------|---------|------------|---------------------------------------|-------------|-------------|----------------------------------------|------------------|
| RMC1/32  | 0402   | 01005 | KAMAYA  | 0.4 ± 0.02 | 0.2 ± 0.02                            | 0.13 ± 0.02 | 0.08 ± 0.03 | 0.1 ± 0.03                             | 0.035mg          |
| RMC1/20  | 0603   | 0201  | KAMAYA  | 0.6 ± 0.03 | 0.3 ± 0.03                            | 0.23 ± 0.03 | 0.1 ± 0.05  | 0.15 ± 0.05                            | 0.16mg           |
| RMC1/16S | 1005   | 0402  | KAMAYA  | 1.0 ± 0.05 | 0.5 ± 0.05                            | 0.35 ± 0.05 | 0.2 ± 0.1   | 0.25 <sup>+0.05</sup> <sub>-0.10</sub> | 0.6mg            |
|          |        |       | WALSIN  |            |                                       |             |             |                                        |                  |
| RMC1/16  | 1608   | 0603  | KAMAYA  | 1.6 ± 0.1  | 0.8 <sup>+0.15</sup> <sub>-0.05</sub> | 0.45 ± 0.10 | 0.3 ± 0.1   | 0.3 ± 0.1                              | 2mg              |
|          |        |       | WALSIN  |            |                                       |             |             |                                        |                  |
| RMC1/10  | 2012   | 0805  | KAMAYA  | 2.0 ± 0.1  | 1.25 ± 0.10                           | 0.55 ± 0.10 | 0.4 ± 0.2   | 0.4 ± 0.2                              | 5mg              |
|          |        |       | WALSIN  |            |                                       |             |             |                                        |                  |
| RMC1/8   | 3216   | 1206  | KAMAYA  | 3.2 ± 0.15 | 1.6 ± 0.15                            | 0.55 ± 0.10 | 0.5 ± 0.25  | 0.5 ± 0.25                             | 9mg              |
|          |        |       | WALSIN  |            |                                       |             |             |                                        |                  |
| RMC1/4   | 3225   | 1210  | KAMAYA  | 3.2 ± 0.15 | 2.5 ± 0.15                            | 0.55 ± 0.15 | 0.5 ± 0.25  | 0.5 ± 0.25                             | 16mg             |
| RMC1/2   | 5025   | 2010  | KAMAYA  | 5.0 ± 0.15 | 2.5 ± 0.15                            | 0.55 ± 0.15 | 0.6 ± 0.2   | 0.6 ± 0.2                              | 25mg             |
| RMC1     | 6332   | 2512  | KAMAYA  | 6.3 ± 0.15 | 3.2 ± 0.15                            | 0.55 ± 0.15 | 0.6 ± 0.2   | 0.6 ± 0.2                              | 40mg             |

\*Values for reference

## ●Part Number Description

Example



## FIXED THICK FILM CHIP RESISTORS; RECTANGULAR TYPE

RMC

## ● Ratings

| Style    | Size Metric (Inch) | Rated Dissipation at 70°C W | Rated Resistance Range |             |           |             |           | Tolerance on Rated Resistance | Temperature Coefficient of Resistance |                      | Limiting Element Voltage V | Isolation Voltage V | Category Temperature Range °C |
|----------|--------------------|-----------------------------|------------------------|-------------|-----------|-------------|-----------|-------------------------------|---------------------------------------|----------------------|----------------------------|---------------------|-------------------------------|
|          |                    |                             | 1Ω                     | 10Ω         | 100Ω      | 1MΩ         | 10MΩ      |                               | Code                                  | 10 <sup>-6</sup> /°C |                            |                     |                               |
| RMC1/32  | 0402<br>( 01005 )  | 0.03<br>(0.5A)              |                        | 4.7 ~ 9.1   | 10 ~ 91   |             |           | F, J                          | -                                     | + 600 ~ - 200        | 15                         | 50                  | - 55 ~ + 125                  |
|          |                    |                             |                        |             |           | 100 ~ 1M    |           | J                             | -                                     | + 1000 ~ + 300       |                            |                     |                               |
|          |                    |                             |                        |             |           |             |           | F, J                          | -                                     | + 600 ~ - 200        |                            |                     |                               |
|          |                    |                             |                        |             |           |             |           | F                             | -                                     | + 350 ~ - 100        |                            |                     |                               |
| RMC1/20  | 0603<br>( 0201 )   | 0.05<br>(1.0A)              | 0.47 ~ 0.91            | 1 ~ 3.92    |           |             |           | F, G, J                       | -                                     | ± 200                | 25                         |                     |                               |
|          |                    |                             |                        | 4.02 ~ 9.76 |           |             |           |                               |                                       |                      |                            |                     |                               |
|          |                    |                             |                        |             | 10 ~ 1M   |             |           |                               |                                       |                      |                            |                     |                               |
|          |                    |                             |                        |             |           | 1.1M ~ 10M  |           | J                             | -                                     |                      |                            |                     |                               |
| RMC1/16S | 1005<br>( 0402 )   | 0.1<br>(1.0A)               |                        | 1 ~ 9.76    |           |             |           | F, J                          | -                                     | + 500 ~ - 200        | 50                         | 100                 |                               |
|          |                    |                             |                        |             | 10 ~ 1M   |             |           | G, J                          | -                                     | ± 200                |                            |                     |                               |
|          |                    |                             |                        |             |           |             |           | F                             | -                                     | ± 100                |                            |                     |                               |
|          |                    |                             |                        |             |           | 1.02M ~ 10M |           | F, G, J                       | -                                     | ± 200                |                            |                     |                               |
| RMC1/16  | 1608<br>( 0603 )   | 0.1<br>(2.0A)               | 0.47 ~ 0.91            | 1 ~ 9.76    |           |             |           | K                             | -                                     | + 1,000 ~ + 300      | 50                         | 100                 |                               |
|          |                    |                             |                        |             | 10 ~ 10M  |             |           | F, G, J                       | -                                     | + 500 ~ - 200        |                            |                     |                               |
|          |                    |                             |                        |             |           |             |           | G, J                          | -                                     | ± 200                |                            |                     |                               |
|          |                    |                             |                        |             |           |             |           | F                             | -                                     | ± 100                |                            |                     |                               |
|          |                    |                             |                        |             |           |             | 11M ~ 22M | J                             | -                                     | ± 200                |                            |                     |                               |
| RMC1/10  | 2012<br>( 0805 )   | 0.125<br>(2.0A)             | 0.27 ~ 0.91            | 1 ~ 9.76    |           |             |           | K                             | -                                     | + 1,000 ~ + 300      | 150                        | 500                 | - 55 ~ + 155                  |
|          |                    |                             |                        |             | 10 ~ 2.2M |             |           | F, G, J                       | -                                     | + 500 ~ - 200        |                            |                     |                               |
|          |                    |                             |                        |             |           |             |           | G, J                          | -                                     | ± 200                |                            |                     |                               |
|          |                    |                             |                        |             |           | 2.21M ~ 10M |           | F                             | -                                     | ± 100                |                            |                     |                               |
|          |                    |                             |                        |             |           |             | 11M ~ 22M | F, G, J                       | -                                     | ± 200                |                            |                     |                               |
|          |                    |                             |                        |             |           |             |           | J                             | -                                     |                      |                            |                     |                               |
| RMC1/8   | 3216<br>( 1206 )   | 0.25<br>(2.0A)              | 0.22 ~ 0.91            | 1 ~ 9.76    |           |             |           | K                             | -                                     | + 1,000 ~ + 300      | 200                        | 500                 | - 55 ~ + 155                  |
|          |                    |                             |                        |             | 10 ~ 1M   |             |           | F, G, J                       | -                                     | + 500 ~ - 200        |                            |                     |                               |
|          |                    |                             |                        |             |           |             |           | G, J                          | -                                     | ± 200                |                            |                     |                               |
|          |                    |                             |                        |             |           | 1.02M ~ 10M |           | F                             | -                                     | ± 100                |                            |                     |                               |
|          |                    |                             |                        |             |           |             | 11M ~ 24M | F, G, J                       | -                                     | ± 200                |                            |                     |                               |
|          |                    |                             |                        |             |           |             |           | J                             | -                                     |                      |                            |                     |                               |
| RMC1/4   | 3225<br>( 1210 )   | 0.33<br>(2.0A)              | 0.2 ~ 0.91             | 1 ~ 9.76    |           |             |           | K                             | -                                     | + 1,000 ~ + 300      | 200                        | 500                 |                               |
|          |                    |                             |                        |             | 10 ~ 1M   |             |           | F, J                          | -                                     | + 500 ~ - 200        |                            |                     |                               |
|          |                    |                             |                        |             |           |             |           | G, J                          | -                                     | ± 200                |                            |                     |                               |
|          |                    |                             |                        |             |           | 1.02M ~ 10M |           | F                             | -                                     | ± 100                |                            |                     |                               |
|          |                    |                             |                        |             |           |             | 11M ~ 22M | F, G, J                       | -                                     | ± 200                |                            |                     |                               |
|          |                    |                             |                        |             |           |             |           | J                             | -                                     |                      |                            |                     |                               |
| RMC1/2   | 5025<br>( 2010 )   | 0.75<br>(2.0A)              | 0.33 ~ 0.91            | 1 ~ 9.76    |           |             |           | K                             | -                                     | + 1,000 ~ + 300      | 200                        | 500                 |                               |
|          |                    |                             |                        |             | 10 ~ 1M   |             |           | F, J                          | -                                     | + 500 ~ - 200        |                            |                     |                               |
|          |                    |                             |                        |             |           |             |           | G, J                          | -                                     | ± 200                |                            |                     |                               |
|          |                    |                             |                        |             |           | 1.1M ~ 22M  |           | F                             | -                                     | ± 100                |                            |                     |                               |
|          |                    |                             |                        |             |           |             |           | J                             | -                                     | ± 200                |                            |                     |                               |
| RMC1     | 6332<br>( 2512 )   | 1.0<br>(2.0A)               | 0.33 ~ 0.91            | 1 ~ 9.76    |           |             |           | K                             | -                                     | + 1,000 ~ + 300      | 200                        | 500                 |                               |
|          |                    |                             |                        |             | 10 ~ 1M   |             |           | F, J                          | -                                     | + 500 ~ - 200        |                            |                     |                               |
|          |                    |                             |                        |             |           |             |           | G, J                          | -                                     | ± 200                |                            |                     |                               |
|          |                    |                             |                        |             |           | 1.1M ~ 22M  |           | F                             | -                                     | ± 100                |                            |                     |                               |
|          |                    |                             |                        |             |           |             |           | J                             | -                                     | ± 200                |                            |                     |                               |

Note1. E24 series is available, E96 series is available for tolerance "F" (1%)

Note2. Rated Voltage =  $\sqrt{(\text{Rated Dissipation}) \times (\text{Rated Resistance})}$ . (d.c. or a.c. r.m.s. Voltage)

Note3. Limiting Element Voltage can only be applied to resistors when the resistance value is equal to or higher than the critical resistance value.

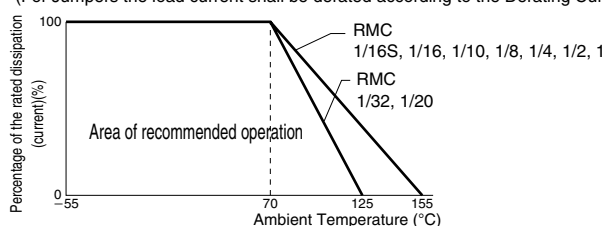
Note4. Critical Resistance Value is the resistance value at which the rated voltage is equal to the limiting element voltage.

Note5. Jumper: Resistance value is less than 50m ohm.

## ● Derating Curve

The derated values of dissipation for temperatures in excess of 70°C shall be indicated by the following Curve.

(For Jumpers the load current shall be derated according to the Derating Curve)



## ● Climatic Category

55/125/56: RMC1/32, 1/20

55/155/56: RMC1/16S, 1/16, 1/10, 1/8, 1/4, 1/2, 1

|                                              | RMC1/32, 1/20 | RMC1/16S, 1/16, 1/10, 1/8, 1/4, 1/2, 1 |
|----------------------------------------------|---------------|----------------------------------------|
| Lower Category Temperature                   | -55°C         | -55°C                                  |
| Upper Category Temperature                   | +125°C        | +155°C                                 |
| Duration of the Damp heat, Steady-State Test | 56 days       | 56 days                                |

## ● Performance Characteristics JIS C 5201-1 : 1998

| Description                                 | Requirements                                                        | Test Methods                                                                                                                                        |
|---------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Voltage proof                               | No breakdown or flashover<br>R <sub>≥</sub> 1G ohm                  | Clause 4.7 RMC1/32, 1/20 50Va.c., 60s<br>RMC1/16S, 1/16 100Va.c., 60s<br>RMC1/10~1 500Va.c., 60s                                                    |
| Variation of resistance with temperature    | See Ratings Table                                                   | Clause 4.8 +20°C/-55°C/+20°C/+125°C/+20°C: RMC1/32, 1/20<br>+20°C/-55°C/+20°C/+155°C/+20°C: RMC1/16S~1                                              |
| Overload                                    | ΔR <sub>±</sub> (1%+0.05 ohm)<br>No visible damage, legible marking | Clause 4.13 The applied voltage shall be 2.5 times of the rated voltage or twice of the limiting element voltage, whichever is the less severe, 2s. |
| Solderability                               | In accordance with Clause 4.17.4.5                                  | Clause 4.17 235°C, 2s                                                                                                                               |
| Resistance to soldering heat                | ΔR <sub>±</sub> (1%+0.05 ohm)                                       | Clause 4.18 After immersion into the flux, the immersion into solder shall be carried out in Solder bath at 260°C for 5s.                           |
| Rapid change of temperature                 | ΔR <sub>±</sub> (1%+0.05 ohm) No visible damage                     | Clause 4.19 5 cycles between -55°C and +125°C: RMC1/32, 1/20<br>5 cycles between -55°C and +155°C: RMC1/16S~1                                       |
| Climatic sequence                           | ΔR <sub>±</sub> (5%+0.1 ohm) No visible damage                      | Clause 4.23 Dry/Damp heat (12+12h cycle), first cycle./ Cold/Damp heat (12+12h cycle), remaining cycle./ D.C.Load.                                  |
| Damp test, steady state                     | ΔR <sub>±</sub> (5%+0.1 ohm) No visible damage, legible marking     | Clause 4.24 40°C, 95%R.H., 56 days, test a) and b) of Clause 4.24.2.1                                                                               |
| Endurance at 70°C                           | ΔR <sub>±</sub> (5%+0.1 ohm) No visible damage                      | Clause 4.25.1 Rated voltage, 1.5h"ON", 0.5h"OFF", 70°C, 1,000h                                                                                      |
| Endurance at the upper category temperature | ΔR <sub>±</sub> (5%+0.1 ohm) No visible damage                      | Clause 4.25.3 125°C, no-load, 1,000h.: RMC1/32, 1/20<br>155°C, no-load, 1,000h.: RMC1/16S~1                                                         |
| Adhesion                                    | No visible damage                                                   | Clause 4.32 5N, 10s (RMC1/20 = 3N, RMC1/32 = 2N)                                                                                                    |
| Bend strength of the face plating           | ΔR <sub>±</sub> (1%+0.05 ohm)                                       | Clause 4.33 RMC1/32~1/4 Amount of bend: 3 mm<br>RMC1/2, 1 Amount of bend: 1 mm                                                                      |