



# Metal thin film chip resistor networks

## ■ RM series

AEC-Q200 Compliant

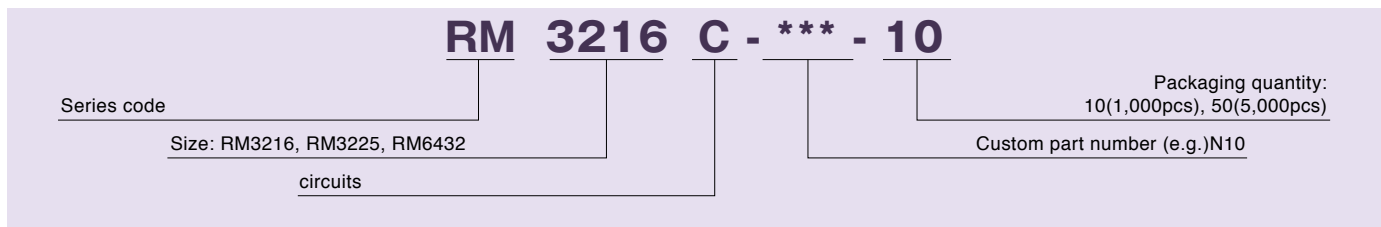
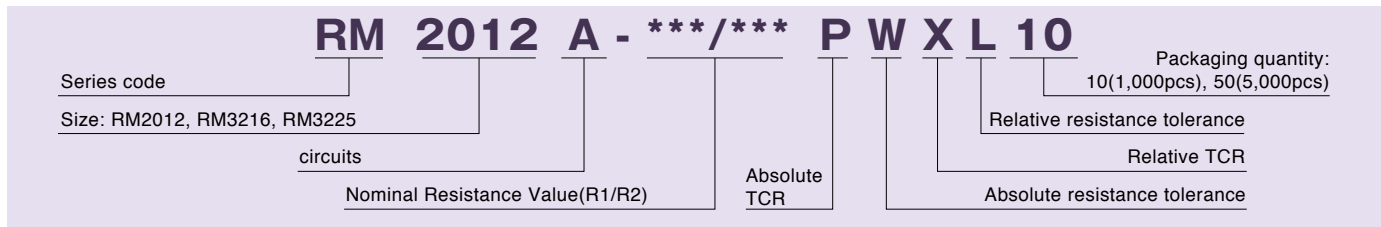
### Features

- Relative resistance tolerance and relative TCR definable among multiple resistors within package.
- Relative resistance tolerance:  $\pm 0.01\%$ , relative TCR:  $\pm 1\text{ppm}/^\circ\text{C}$
- Number of resistors in package: 2 or higher, standard and custom circuits designs available
- RG series equivalent reliability and long term stability: less than  $\pm 0.1\%$  drift after 10000 hour stress test.
- RoHS compliant, 100% lead free

### Applications

- Precision measurement instrumentation, medical electronics, automotive electronics
- Voltage divider and amplification circuits that require very precise relative resistance tolerance and TCR
- Multi step precision amplification circuits for minute signals

## ◆ Part numbering system



\* Please contact our sales office regarding custom products including resistance, resistance combination, number of elements, circuit, and others.

\* Standard quantity / reel is 1000 and 5000. Please contact our sales office for custom product's quantity / reel.

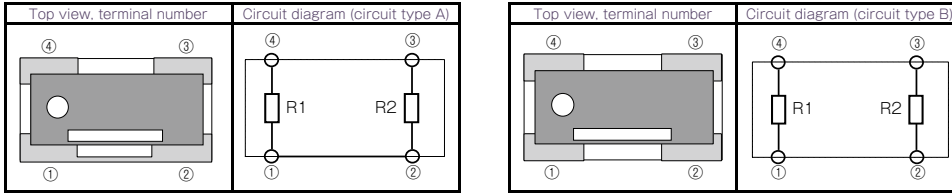
\* Standard resistance value pairings are shown as below  
(Standard products are 2element circuit typeA & typeB only.)

## ◆ Standard resistance value pairings

| Ratio | R1 (Ω) | R2 (Ω) | Ratio | R1 (Ω) | R2 (Ω) | Ratio | R1 (Ω) | R2 (Ω) | Ratio  | R1 (Ω) | R2 (Ω) | Ratio  | R1 (Ω) | R2 (Ω) | Ratio   | R1 (Ω) | R2 (Ω) |
|-------|--------|--------|-------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|
| 1 : 1 | 1k     | 1k     | 1 : 3 | 1k     | 3k     | 1 : 5 | 1k     | 5k     | 1 : 9  | 1k     | 9k     | 1 : 20 | 1k     | 20k    | 1 : 50  | 1K     | 50k    |
|       | 10k    | 10k    |       | 10k    | 30k    |       | 2k     | 10k    |        | 10k    | 90k    |        | 2k     | 40k    |         | 2K     | 100k   |
|       | 100k   | 100k   |       | 100k   | 300k   |       | 10k    | 50k    |        | 1k     | 10k    |        | 5k     | 100k   |         | 1K     | 100k   |
| 1 : 2 | 1k     | 2k     | 1 : 4 | 1k     | 4k     | 1 : 6 | 1k     | 6k     | 1 : 10 | 2k     | 20k    | 1 : 25 | 1k     | 25k    | 1 : 100 | 2K     | 200k   |
|       | 10k    | 20k    |       | 10k    | 40k    |       | 10k    | 60k    |        | 10k    | 100k   |        | 2k     | 50k    |         |        |        |
|       | 100k   | 200k   |       |        |        |       |        |        |        |        |        |        |        |        |         |        |        |

# ◆ Electrical Specification

## ○ 4 terminal, 2 element

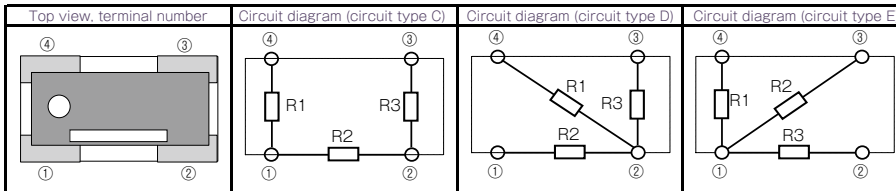


| Type   | Power ratings (85°C)                 | Resistance range (Ω) | Resistance tolerance (Code)       |   |                                   |                                   | Temperature coefficient of resistance (Code) <sup>*1</sup> |   |   |                              | Packaging quantity (designation)                |
|--------|--------------------------------------|----------------------|-----------------------------------|---|-----------------------------------|-----------------------------------|--|---|---|------------------------------|---|
|        |                                      |                      | Absolute tolerance                | Relative tolerance <sup>*2</sup>                      |                                   |                                   | Absolute tolerance   | Relative tolerance <sup>*2</sup>          |   |                              |   |
|        |                                      |                      |                                   | Resistance ratio = 1                                  | 1 < Resistance ratio ≤ 100        | 100 < Resistance ratio ≤ 500      |  | Resistance ratio = 1                      | 1 < Resistance ratio ≤ 100                | 100 < Resistance ratio ≤ 500 |   |
| RM2012 | 0.05W / Element<br>0.1W / Package    | 100 ~ <300           | ±0.1%(B)<br>±0.5%(D)              | ±0.02%(P)<br>±0.05%(W)<br>±0.1%(B)<br>±0.5%(D)        | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | -                                 | ±10ppm/°C(N)<br>±25ppm/°C(P)                               | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V)                | -                            |   |
|        |                                      | 300 ~ 100k           | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±0.01%(L) ±0.02%(P)<br>±0.05%(W) ±0.1%(B)<br>±0.5%(D) | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±5ppm/°C(V)<br>±10ppm/°C(N)<br>±25ppm/°C(P)                | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V)   |   |
| RM3216 | 0.083W / Element<br>0.125W / Package | 100 ~ <300           | ±0.1%(B)<br>±0.5%(D)              | ±0.02%(P)<br>±0.05%(W)<br>±0.1%(B)<br>±0.5%(D)        | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | -                                 | ±10ppm/°C(N)<br>±25ppm/°C(P)                               | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V)                | -                            | tape & reel (T&R)<br>10=1,000pcs<br>50=5,000pcs |
|        |                                      | 300 ~ 500k           | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±0.01%(L) ±0.02%(P)<br>±0.05%(W) ±0.1%(B)<br>±0.5%(D) | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±5ppm/°C(V)<br>±10ppm/°C(N)<br>±25ppm/°C(P)                | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V)   |   |
| RM3225 | 0.1W / Element<br>0.2W / Package     | 100 ~ <300           | ±0.1%(B)<br>±0.5%(D)              | ±0.02%(P)<br>±0.05%(W)<br>±0.1%(B)<br>±0.5%(D)        | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | -                                 | ±10ppm/°C(N)<br>±25ppm/°C(P)                               | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V)                | -                            |   |
|        |                                      | 300 ~ 500k           | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±0.01%(L) ±0.02%(P)<br>±0.05%(W) ±0.1%(B)<br>±0.5%(D) | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±5ppm/°C(V)<br>±10ppm/°C(N)<br>±25ppm/°C(P)                | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V)   |   |

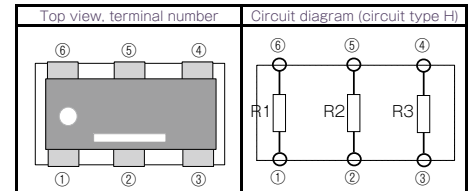
\*1 TCR guaranteed range : -20°C ~ 125°C

\*2 Contact us for detailed information on relative tolerance and TCR.

## ○ 4 terminal, 3 element



## ○ 6 terminal, 3 element



| Type   | Power rating (85°C)                  | Resistance range (Ω) | Resistance tolerance (Code)       |   |                                   |                                   | Temperature coefficient of resistance (Code) <sup>*1</sup> |   |   |                              | Packaging quantity (designation)                |
|--------|--------------------------------------|----------------------|-----------------------------------|---|-----------------------------------|-----------------------------------|--|---|---|------------------------------|---|
|        |                                      |                      | Absolute tolerance                | Relative tolerance <sup>*2</sup>                      |                                   |                                   | Absolute tolerance   | Relative tolerance <sup>*2</sup>          |   |                              |   |
|        |                                      |                      |                                   | Resistance ratio = 1                                  | 1 < Resistance ratio ≤ 100        | 100 < Resistance ratio ≤ 500      |  | Resistance ratio = 1                      | 1 < Resistance ratio ≤ 100                | 100 < Resistance ratio ≤ 500 |   |
| RM3216 | 0.042W / Element<br>0.125W / Package | 100 ~ <300           | ±0.1%(B)<br>±0.5%(D)              | ±0.02%(P)<br>±0.05%(W)<br>±0.1%(B)<br>±0.5%(D)        | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | -                                 | ±10ppm/°C(N)<br>±25ppm/°C(P)                               | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V)                | -                            | tape & reel (T&R)<br>10=1,000pcs<br>50=5,000pcs |
|        |                                      | 300 ~ 100k           | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±0.01%(L) ±0.02%(P)<br>±0.05%(W) ±0.1%(B)<br>±0.5%(D) | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±5ppm/°C(V)<br>±10ppm/°C(N)<br>±25ppm/°C(P)                | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V)   |   |
| RM3225 | 0.066W / Element<br>0.2W / Package   | 100 ~ <300           | ±0.1%(B)<br>±0.5%(D)              | ±0.02%(P)<br>±0.05%(W)<br>±0.1%(B)<br>±0.5%(D)        | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | -                                 | ±10ppm/°C(N)<br>±25ppm/°C(P)                               | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V)                | -                            |   |
|        |                                      | 300 ~ 100k           | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±0.01%(L) ±0.02%(P)<br>±0.05%(W) ±0.1%(B)<br>±0.5%(D) | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±5ppm/°C(V)<br>±10ppm/°C(N)<br>±25ppm/°C(P)                | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V)   |   |

\*1 TCR guaranteed range : -20°C ~ 125°C

\*2 Contact us for detailed information on relative tolerance and TCR.

# Metal thin film chip resistor networks

## ■ RM series

### ○ 6 terminal, 4 element



| Type   | Power ratings (85°C)                 | Resistance range (Ω) | Resistance tolerance (Code)       |   |                                   |   | Temperature coefficient of resistance (Code) <sup>*1</sup> |   |                            |                              | Packaging quantity (designation) |
|--------|--------------------------------------|----------------------|-----------------------------------|---|-----------------------------------|---|--|---|----------------------------|------------------------------|----------------------------------|
|        |                                      |                      | Absolute tolerance                | Relative tolerance <sup>*2</sup>                      |                                   |   | Absolute tolerance   | Relative tolerance <sup>*2</sup>          |                            |                              |                                  |
|        |                                      |                      |                                   | Resistance ratio = 1                                  | 1 < Resistance ratio ≤ 100        | 100 < Resistance ratio ≤ 500                |  | Resistance ratio = 1                      | 1 < Resistance ratio ≤ 100 | 100 < Resistance ratio ≤ 500 |                                  |
| RM3216 | 0.032W / Element<br>0.125W / Package | 100 ~ <300           | ±0.1%(B)<br>±0.5%(D)              | ±0.02%(P)<br>±0.05%(W)<br>±0.1%(B)<br>±0.5%(D)        | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | -   | ±10ppm/°C(N)<br>±25ppm/°C(P)                               | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V) | -                            | tape & reel (T&R)                |
|        |                                      | 300 ~ 100k           | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±0.01%(L) ±0.02%(P)<br>±0.05%(W) ±0.1%(B)<br>±0.5%(D) | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±5ppm/°C(V)<br>±10ppm/°C(N)<br>±25ppm/°C(P) | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V)                  | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V) |                              |                                  |
| RM3225 | 0.05W / Element<br>0.2W / Package    | 100 ~ <300           | ±0.1%(B)<br>±0.5%(D)              | ±0.02%(P)<br>±0.05%(W)<br>±0.1%(B)<br>±0.5%(D)        | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | -   | ±10ppm/°C(N)<br>±25ppm/°C(P)                               | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V) | -                            | 10=1,000pcs<br>50=5,000pcs       |
|        |                                      | 300 ~ 100k           | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±0.01%(L) ±0.02%(P)<br>±0.05%(W) ±0.1%(B)<br>±0.5%(D) | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±5ppm/°C(V)<br>±10ppm/°C(N)<br>±25ppm/°C(P) | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V)                  | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V) |                              |                                  |

\*1 TCR guaranteed range : -20°C ~ 125°C

\*2 Contact us for detailed information on relative tolerance and TCR.

### ○ 8 terminal, 4 element



| Type   | Power ratings (85°C)                 | Resistance range (Ω) | Resistance tolerance (Code)       |   |                                   |   | Temperature coefficient of resistance (Code) <sup>*1</sup> |   |                            |                              | Packaging quantity (designation) |
|--------|--------------------------------------|----------------------|-----------------------------------|---|-----------------------------------|---|--|---|----------------------------|------------------------------|----------------------------------|
|        |                                      |                      | Absolute tolerance                | Relative tolerance <sup>*2</sup>                      |                                   |   | Absolute tolerance   | Relative tolerance <sup>*2</sup>          |                            |                              |                                  |
|        |                                      |                      |                                   | Resistance ratio = 1                                  | 1 < Resistance ratio ≤ 100        | 100 < Resistance ratio ≤ 500                |  | Resistance ratio = 1                      | 1 < Resistance ratio ≤ 100 | 100 < Resistance ratio ≤ 500 |                                  |
| RM3216 | 0.032W / Element<br>0.125W / Package | 100 ~ <300           | ±0.1%(B)<br>±0.5%(D)              | ±0.02%(P)<br>±0.05%(W)<br>±0.1%(B)<br>±0.5%(D)        | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | -   | ±10ppm/°C(N)<br>±25ppm/°C(P)                               | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V) | -                            | tape & reel (T&R)                |
|        |                                      | 300 ~ 100k           | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±0.01%(L) ±0.02%(P)<br>±0.05%(W) ±0.1%(B)<br>±0.5%(D) | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±5ppm/°C(V)<br>±10ppm/°C(N)<br>±25ppm/°C(P) | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V)                  | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V) |                              |                                  |
| RM3225 | 0.05W / Element<br>0.2W / Package    | 100 ~ <300           | ±0.1%(B)<br>±0.5%(D)              | ±0.02%(P)<br>±0.05%(W)<br>±0.1%(B)<br>±0.5%(D)        | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | -   | ±10ppm/°C(N)<br>±25ppm/°C(P)                               | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V) | -                            | 10=1,000pcs<br>50=5,000pcs       |
|        |                                      | 300 ~ 100k           | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±0.01%(L) ±0.02%(P)<br>±0.05%(W) ±0.1%(B)<br>±0.5%(D) | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±5ppm/°C(V)<br>±10ppm/°C(N)<br>±25ppm/°C(P) | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V)                  | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V) |                              |                                  |
| RM6432 | 0.1W / Element<br>0.4W / Package     | 100 ~ <300           | ±0.1%(B)<br>±0.5%(D)              | ±0.02%(P)<br>±0.05%(W)<br>±0.1%(B)<br>±0.5%(D)        | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | -   | ±10ppm/°C(N)<br>±25ppm/°C(P)                               | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V) | -                            | tape & reel (T&R)                |
|        |                                      | 300 ~ 1M             | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±0.01%(L) ±0.02%(P)<br>±0.05%(W) ±0.1%(B)<br>±0.5%(D) | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±5ppm/°C(V)<br>±10ppm/°C(N)<br>±25ppm/°C(P) | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V)                  | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V) |                              |                                  |

\*1 TCR guaranteed range : -20°C ~ 125°C

\*2 Contact us for detailed information on relative tolerance and TCR.

○ 8 terminal, 6 element



| Type   | Power ratings (85°C)                 | Resistance range (Ω) | Resistance tolerance (Code)       |   |                                   |                                   | Temperature coefficient of resistance (Code) <sup>*1</sup> |   |   |                              | Packaging quantity (designation)                |
|--------|--------------------------------------|----------------------|-----------------------------------|---|-----------------------------------|-----------------------------------|--|---|---|------------------------------|---|
|        |                                      |                      | Absolute tolerance                | Relative tolerance <sup>*2</sup>                      |                                   |                                   | Absolute tolerance   | Relative tolerance <sup>*2</sup>          |   |                              |   |
|        |                                      |                      |                                   | Resistance ratio = 1                                  | 1 < Resistance ratio ≤ 100        | 100 < Resistance ratio ≤ 500      |  | Resistance ratio = 1                      | 1 < Resistance ratio ≤ 100                | 100 < Resistance ratio ≤ 500 |   |
| RM3216 | 0.021W / Element<br>0.125W / Package | 100 ~ <300           | ±0.1%(B)<br>±0.5%(D)              | ±0.02%(P)<br>±0.05%(W)<br>±0.1%(B)<br>±0.5%(D)        | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | -                                 | ±10ppm/°C(N)<br>±25ppm/°C(P)                               | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V)                | -                            | tape & reel (T&R)<br>10=1,000pcs<br>50=5,000pcs |
|        |                                      | 300 ~ 100k           | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±0.01%(L) ±0.02%(P)<br>±0.05%(W) ±0.1%(B)<br>±0.5%(D) | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±5ppm/°C(V)<br>±10ppm/°C(N)<br>±25ppm/°C(P)                | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V)   |   |
| RM3225 | 0.033W / Element<br>0.2W / Package   | 100 ~ <300           | ±0.1%(B)<br>±0.5%(D)              | ±0.02%(P)<br>±0.05%(W)<br>±0.1%(B)<br>±0.5%(D)        | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | -                                 | ±10ppm/°C(N)<br>±25ppm/°C(P)                               | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V)                | -                            |   |
|        |                                      | 300 ~ 100k           | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±0.01%(L) ±0.02%(P)<br>±0.05%(W) ±0.1%(B)<br>±0.5%(D) | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±5ppm/°C(V)<br>±10ppm/°C(N)<br>±25ppm/°C(P)                | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V)   |   |
| RM6432 | 0.066W / Element<br>0.4W / Package   | 100 ~ <300           | ±0.1%(B)<br>±0.5%(D)              | ±0.02%(P)<br>±0.05%(W)<br>±0.1%(B)<br>±0.5%(D)        | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | -                                 | ±10ppm/°C(N)<br>±25ppm/°C(P)                               | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V)                | -                            |   |
|        |                                      | 300 ~ 1M             | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±0.01%(L) ±0.02%(P)<br>±0.05%(W) ±0.1%(B)<br>±0.5%(D) | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±0.05%(W)<br>±0.1%(B)<br>±0.5%(D) | ±5ppm/°C(V)<br>±10ppm/°C(N)<br>±25ppm/°C(P)                | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±1ppm/°C(X)<br>±2ppm/°C(W)<br>±5ppm/°C(V) | ±2ppm/°C(W)<br>±5ppm/°C(V)   |   |

\*1 TCR guaranteed range : -20°C ~ 125°C

\*2 Contact us for detailed information on relative tolerance and TCR.

○ Some examples of custom RM series

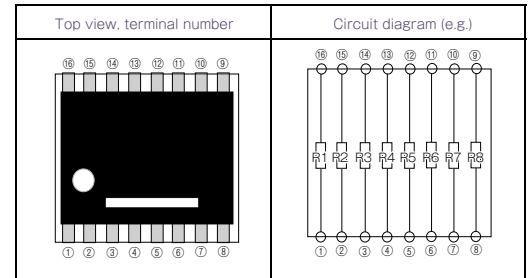
RM2525(2.5mm×2.5mm)



RM5882(5.8mm×8.2mm)



RM10280(10.2mm×7.2mm)



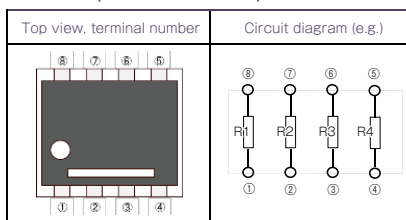
RM8258(8.2mm×5.8mm)



RM11264(11.2mm×6.4mm)



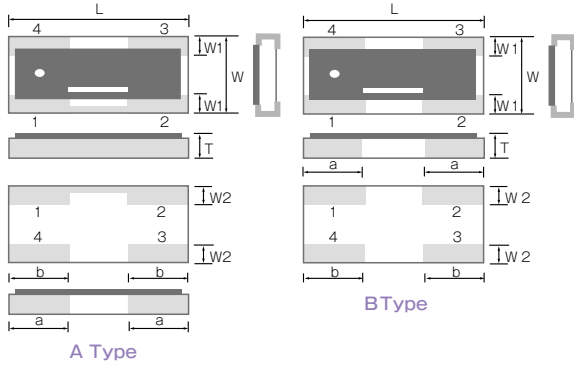
RM5050(5.0mm×5.0mm)



# Metal thin film chip resistor networks

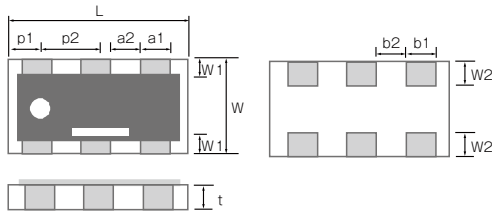
## ■ RM series

### ◆ Dimensions



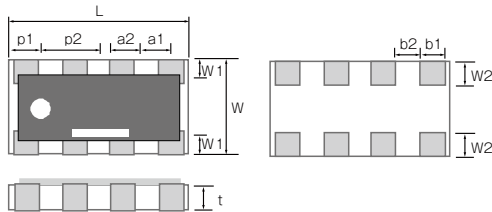
| 4 terminal |             |           |           |           |           |           |           |           |
|------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Type       | Size (inch) | L         | W         | t         | a         | b         | W1        | W2        |
| RM2012     | 0805        | 2.00±0.20 | 1.25±0.20 | 0.45±0.10 | 0.50±0.20 | 0.60±0.20 | 0.40±0.20 | 0.35±0.20 |
| RM3216     | 1206        | 3.20±0.20 | 1.60±0.20 | 0.45±0.10 | 1.00±0.25 | 1.00±0.20 | 0.40±0.25 | 0.40±0.20 |
| RM3225     | 1209        | 3.20±0.20 | 2.50±0.20 | 0.45±0.10 | 1.00±0.25 | 1.00±0.20 | 0.40±0.25 | 0.60±0.20 |

(unit : mm)



| 6 terminal |             |           |           |           |           |           |           |           |           |           |           |           |
|------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Type       | Size (inch) | L         | W         | t         | a1        | a2        | b1        | b2        | p1        | p2        | W1        | W2        |
| RM3216     | 1206        | 3.20±0.20 | 1.60±0.20 | 0.45±0.10 | 0.50±0.20 | 0.45±0.20 | 0.50±0.20 | 0.45±0.20 | 0.63±0.20 | 0.95±0.10 | 0.23±0.20 | 0.40±0.20 |
| RM3225     | 1209        | 3.20±0.20 | 2.50±0.20 | 0.45±0.10 | 0.50±0.10 | 0.45±0.10 | 0.50±0.10 | 0.45±0.10 | 0.63±0.20 | 0.95±0.10 | 0.30±0.20 | 0.50±0.20 |

(unit : mm)



| 8 terminal |             |           |           |           |                     |                     |                     |                     |           |           |           |           |
|------------|-------------|-----------|-----------|-----------|---------------------|---------------------|---------------------|---------------------|-----------|-----------|-----------|-----------|
| Type       | Size (inch) | L         | W         | t         | a1                  | a2                  | b1                  | b2                  | p1        | p2        | W1        | W2        |
| RM3216     | 1206        | 3.20±0.20 | 1.60±0.20 | 0.45±0.10 | 0.50±0.20           | 0.40±0.20           | 0.50±0.20           | 0.45±0.20           | 0.40±0.20 | 0.80±0.10 | 0.30±0.20 | 0.40±0.20 |
| RM3225     | 1209        | 3.20±0.20 | 2.50±0.20 | 0.45±0.10 | 0.40<br>+0.20/-0.10 | 0.40<br>+0.10/-0.20 | 0.40<br>+0.10/-0.20 | 0.40<br>+0.10/-0.20 | 0.40±0.20 | 0.80±0.10 | 0.30±0.20 | 0.40±0.20 |
| RM6432     | 2512        | 6.40±0.20 | 3.20±0.20 | 0.50±0.10 | 0.66<br>+0.20/-0.10 | 0.94<br>+0.10/-0.20 | 0.66<br>+0.20/-0.10 | 0.94<br>+0.10/-0.20 | 0.80±0.20 | 1.60±0.10 | 0.50±0.20 | 0.60±0.10 |

(unit : mm)

## ◆ Reliability specification

| Test items                     | Condition (test methods (MIL-PRF-55342/JIS C5201-1))             | Standard           |                    |
|--------------------------------|--|--------------------|--------------------|
|                                |  | Absolute tolerance | Relative tolerance |
| Short time overload            | 2.5 x rated voltage, <sup>*1</sup> 5seconds                      | ±(0.05%+0.01Ω)     | ±0.02%             |
| Life (biased)                  | 85°C, rated voltage, <sup>*1</sup> 90min on 30min off, 1000hours | ±(0.05%+0.01Ω)     | ±0.02%             |
| High temperature high humidity | 85°C, 85%RH, 1/10 of rated power, 90min on 30min off, 1000hours  | ±(0.05%+0.01Ω)     | ±0.02%             |
| Temperature shock              | -55°C (38min) ~ 125°C (30min) 1000cycles <sup>*2</sup>           | ±(0.05%+0.01Ω)     | ±0.02%             |
| High temperature exposure      | 155°C, no bias, 100hours   | ±(0.05%+0.01Ω)     | ±0.02%             |
| Resistance to soldering heat   | 260±5°C, 10 seconds (reflow)                                     | ±(0.05%+0.01Ω)     | ±0.02%             |

\*1 Rated voltage is given by  $E = \sqrt{R \times P}$

E= rated voltage (V), R=nominal resistance value(Ω), P=rated power(W)

If rated voltage exceeds maximum voltage /element, maximum voltage/element is the rated voltage.

\*2 Based on the tests done on RM316.RM3225.

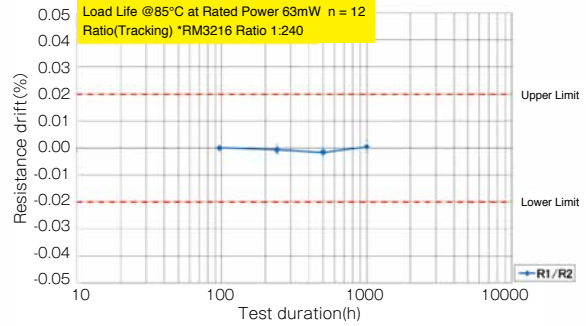
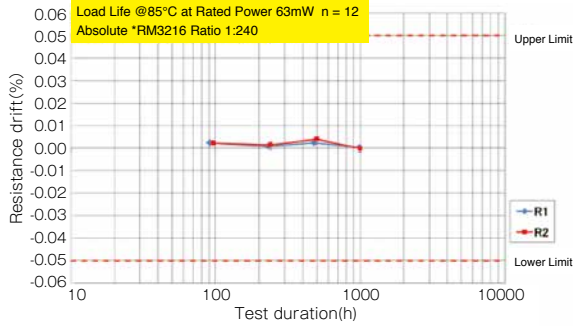
Please contact our sales office for other or custom dimensional products

# Metal thin film chip resistor networks

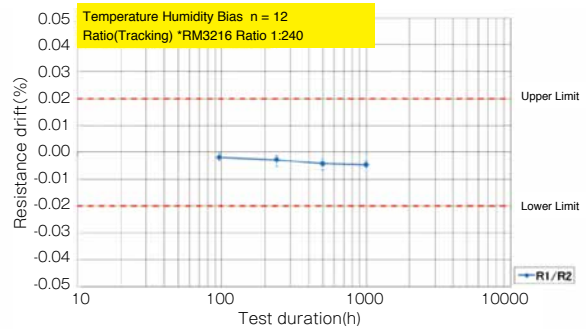
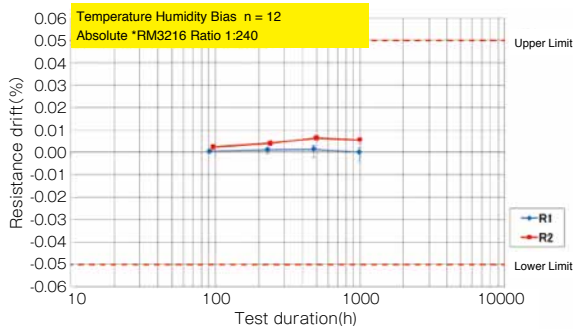
## RM series

### Reliability test data

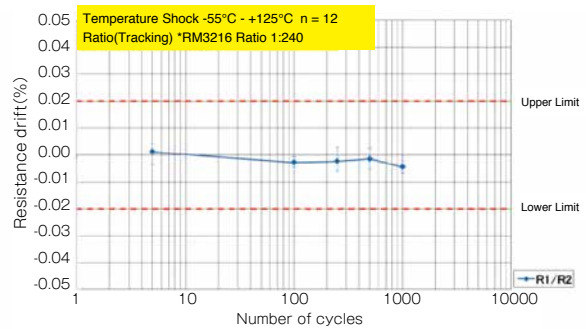
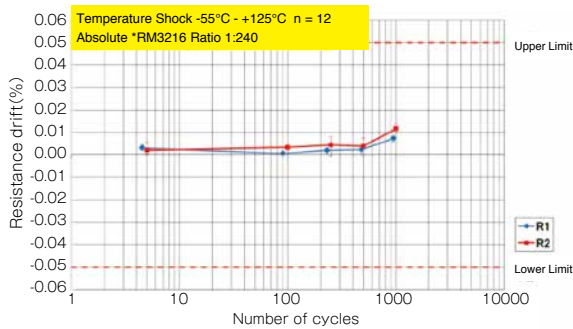
#### Load life with rated power @85°C



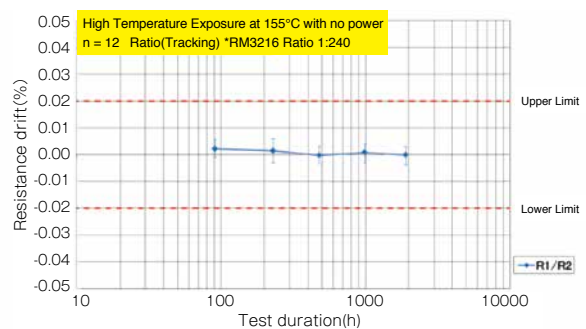
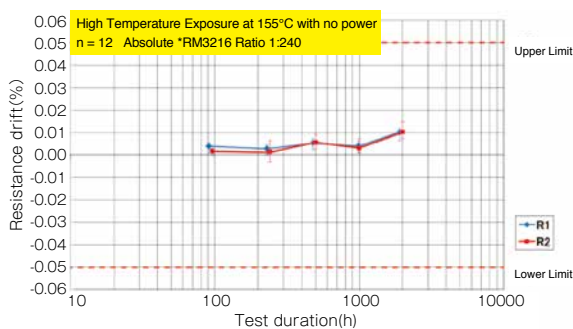
#### High temperature high humidity (biased)



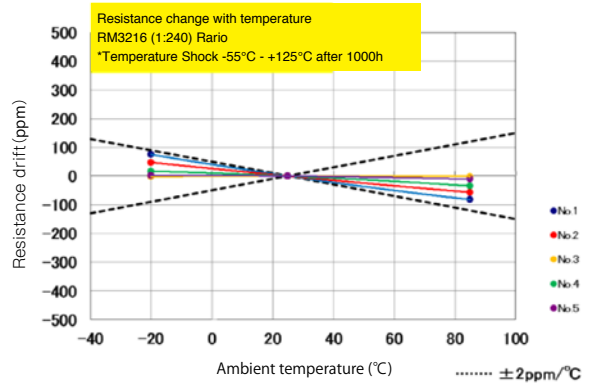
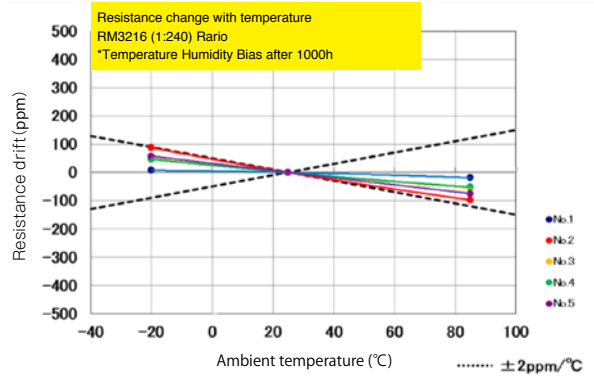
#### Temperature shock



#### High temperature exposure (155°C)



## ◆ TCR linearity



## ◆ Derating Curve





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