

### Features:

- Small size and light weight
- Reliability and high quality
- “-HP” denotes high power
- “-UP” denotes ultra-high power
- Inner termination engineered to deter sulfur contamination
- RoHS compliant, REACH compliant, and halogen free
- AEC-Q200 qualified



### Electrical Specifications - RMCA

| Type/Code | Power Rating (W) @ 70°C | Maximum Working Voltage <sup>(1)</sup> (V) | Maximum Overload Voltage (V) | TCR (ppm/°C) | Ohmic Range (Ω) and Tolerance |           |               |             |
|-----------|-------------------------|--------------------------------------------|------------------------------|--------------|-------------------------------|-----------|---------------|-------------|
|           |                         |                                            |                              |              | 0.1%                          | 0.5%      | 1%            | 5%          |
| RMCA0201  | 0.05                    | 25                                         | 50                           | ±200         | -                             | 100 - 10K | 10 - 3M       | 10 - 10M    |
|           |                         |                                            |                              | +600/-200    | -                             | -         | 1 - 9.76      | -           |
| RMCA0402  | 0.063                   | 0.12 - 0.25                                | 0.624                        | ±1000        | -                             | -         | 0.22 - 0.45   | -           |
|           |                         |                                            |                              | ±800         |                               |           | 0.475 - 0.976 | 0.47 - 0.91 |
|           |                         |                                            |                              | ±400         |                               |           | 1 - 9.76      | -           |
|           |                         | 50                                         | 100                          | ±200         |                               |           | 10.2M - 29.4M | 11M - 30M   |
|           |                         |                                            |                              | ±100         |                               |           | 10 - 10M      | -           |
| RMCA0603  | 0.1                     | 0.1 - 0.31                                 | 0.775                        | ±1000        | -                             | -         | 0.075 - 0.976 | -           |
|           |                         |                                            |                              | ±800         |                               |           | 0.1 - 0.324   | 0.1 - 0.33  |
|           |                         |                                            |                              | ±600         |                               |           | 0.332 - 0.976 | 0.36 - 0.91 |
|           |                         | 75                                         | 150                          | ±400         |                               |           | 1 - 9.76      | -           |
|           |                         |                                            |                              | ±200         |                               |           | 10.2M - 29.4M | 11M - 30M   |
|           |                         |                                            |                              | ±100         |                               |           | 10 - 10M      | -           |
| RMCA0805  | 0.125                   | 0.04 - 0.35                                | 0.875                        | ±1800        | -                             | -         | 0.01 - 0.049  | -           |
|           |                         |                                            |                              | ±800         |                               |           | 0.05 - 0.976  | -           |
|           |                         |                                            |                              | ±600         |                               |           | 0.1 - 0.976   | 0.1 - 0.91  |
|           |                         | 150                                        | 300                          | ±400         |                               |           | 1 - 9.76      | -           |
|           |                         |                                            |                              | ±200         |                               |           | 10.2M - 29.4M | 11M - 30M   |
|           |                         |                                            |                              | ±100         |                               |           | 10 - 10M      | -           |
| RMCA1206  | 0.25                    | 0.05 - 0.5                                 | 1.25                         | ±1800        | -                             | -         | 0.01 - 0.049  | -           |
|           |                         |                                            |                              | ±800         |                               |           | 0.05 - 0.976  | -           |
|           |                         |                                            |                              | ±600         |                               |           | 0.1 - 0.976   | 0.1 - 0.91  |
|           |                         | 200                                        | 400                          | ±400         |                               |           | 1 - 9.76      | -           |
|           |                         |                                            |                              | ±200         |                               |           | 10.2M - 29.4M | 11M - 30M   |
|           |                         |                                            |                              | ±100         |                               |           | 10 - 10M      | -           |
| RMCA1210  | 0.5                     | 0.07 - 0.7                                 | 1.75                         | ±1800        | -                             | -         | 0.01 - 0.05   | 0.01 - 0.05 |
|           |                         |                                            |                              | ±800         |                               |           | 0.051 - 0.1   | 0.051 - 0.1 |
|           |                         |                                            |                              | ±600         |                               |           | 0.102 - 0.976 | 0.11 - 0.91 |
|           |                         | 200                                        | 400                          | ±400         |                               |           | 1 - 9.76      | -           |
|           |                         |                                            |                              | ±200         |                               |           | 10.2M - 29.4M | 11M - 30M   |
|           |                         |                                            |                              | ±100         |                               |           | 10 - 10M      | -           |
| RMCA2010  | 0.75                    | 0.08 - 0.8                                 | 2.15                         | ±1800        | -                             | -         | 0.01 - 0.049  | -           |
|           |                         |                                            |                              | ±800         |                               |           | 0.05 - 0.976  | -           |
|           |                         |                                            |                              | ±600         |                               |           | 0.1 - 0.976   | 0.1 - 0.91  |
|           |                         | 200                                        | 400                          | ±400         |                               |           | 1 - 9.76      | -           |
|           |                         |                                            |                              | ±200         |                               |           | 10.2M - 29.4M | 11M - 30M   |
|           |                         |                                            |                              | ±100         |                               |           | 10 - 10M      | -           |

### Electrical Specifications - RMCA (cont.)

| Type/Code | Power Rating (Watts) @ 70°C | Maximum Working Voltage <sup>(1)</sup> | Maximum Overload Voltage | TCR (ppm/°C) | Ohmic Range (Ω) and Tolerance |      |               |            |
|-----------|-----------------------------|----------------------------------------|--------------------------|--------------|-------------------------------|------|---------------|------------|
|           |                             |                                        |                          |              | 0.1%                          | 0.5% | 1%            | 5%         |
| RMCA2512  | 1                           | 0.1 - 0.99                             | 2.475                    | ±1800        | -                             |      | 0.01 - 0.049  |            |
|           |                             |                                        |                          | ±800         |                               |      | 0.05 - 0.976  |            |
|           |                             |                                        |                          | ±600         |                               |      | 0.1 - 0.976   | 0.1 - 0.91 |
|           |                             | 200                                    | 400                      | ±400         |                               |      | 1 - 9.76      |            |
|           |                             |                                        |                          | ±200         |                               |      | 10.2M - 29.4M | 11M - 30M  |
|           |                             |                                        |                          | ±100         |                               |      | 10 - 10M      |            |

(1) Lesser of  $\sqrt{P \cdot R}$  or maximum working voltage.

Operating Temperature Range: -55 ~ +155°C

### Electrical Specifications – RMCA\_HP

| Type/Code   | Power Rating (W) @ 70°C | Maximum Working Voltage <sup>(1)</sup> (V) | Maximum Overload Voltage (V) | TCR (ppm/°C) | Ohmic Range (Ω) and Tolerance |  |
|-------------|-------------------------|--------------------------------------------|------------------------------|--------------|-------------------------------|--|
|             |                         |                                            |                              |              | 1% and 5%                     |  |
| RMCA0402-HP | 0.1                     | 0.15 - 0.31                                | 0.786                        | ±1000        | 0.22 - 0.45                   |  |
|             |                         |                                            |                              | ±800         | 0.46 - 0.97                   |  |
|             |                         | 50                                         | 100                          | ±400         | 1 - 9.76                      |  |
|             |                         |                                            |                              | ±100         | 10 - 10M                      |  |
|             |                         |                                            |                              | ±200         | 10.1M - 30M                   |  |
|             |                         |                                            |                              | ±1000        | 0.075 - 0.097                 |  |
| RMCA0603-HP | 0.125                   | 0.1 - 0.35                                 | 0.879                        | ±800         | 0.1 - 0.33                    |  |
|             |                         |                                            |                              | ±600         | 0.34 - 0.97                   |  |
|             |                         | 75                                         | 150                          | ±400         | 1 - 9.76                      |  |
|             |                         |                                            |                              | ±100         | 10 - 10M                      |  |
|             |                         |                                            |                              | ±200         | 10.1M - 30M                   |  |
|             |                         |                                            |                              | ±1800        | 0.01 - 0.049                  |  |
| RMCA0805-HP | 0.25                    | 0.05 - 0.5                                 | 1.244                        | ±800         | 0.05 - 0.097                  |  |
|             |                         |                                            |                              | ±600         | 0.1 - 0.97                    |  |
|             |                         | 150                                        | 300                          | ±400         | 1 - 9.76                      |  |
|             |                         |                                            |                              | ±100         | 10 - 10M                      |  |
|             |                         |                                            |                              | ±200         | 10.1M - 30M                   |  |
|             |                         |                                            |                              | ±1800        | 0.01 - 0.049                  |  |
| RMCA1206-HP | 0.5                     | 0.07 - 0.7                                 | 1.759                        | ±800         | 0.05 - 0.097                  |  |
|             |                         |                                            |                              | ±600         | 0.1 - 0.97                    |  |
|             |                         | 200                                        | 400                          | ±400         | 1 - 9.76                      |  |
|             |                         |                                            |                              | ±100         | 10 - 10M                      |  |
|             |                         |                                            |                              | ±200         | 10.1M - 30M                   |  |
|             |                         |                                            |                              | ±1800        | 0.01 - 0.049                  |  |
| RMCA1210-HP | 0.66                    | 0.07 - 0.7                                 | 1.759                        | ±800         | 0.05 - 0.097                  |  |
|             |                         |                                            |                              | ±600         | 0.1 - 0.97                    |  |
|             |                         | 200                                        | 400                          | ±400         | 1 - 9.76                      |  |
|             |                         |                                            |                              | ±100         | 10 - 10M                      |  |
|             |                         |                                            |                              | ±200         | 10.1M - 30M                   |  |
|             |                         |                                            |                              | ±1800        | 0.01 - 0.049                  |  |
| RMCA2010-HP | 1                       | 0.1 - 0.99                                 | 2.487                        | ±800         | 0.05 - 0.097                  |  |
|             |                         |                                            |                              | ±600         | 0.1 - 0.97                    |  |
|             |                         | 200                                        | 400                          | ±400         | 1 - 9.76                      |  |
|             |                         |                                            |                              | ±100         | 10 - 10M                      |  |
|             |                         |                                            |                              | ±200         | 10.1M - 30M                   |  |
|             |                         |                                            |                              | ±1800        | 0.01 - 0.049                  |  |
| RMCA2512-HP | 2                       | 0.14 - 1.41                                | 3.518                        | ±800         | 0.05 - 0.097                  |  |
|             |                         |                                            |                              | ±600         | 0.1 - 0.97                    |  |
|             |                         | 200                                        | 400                          | ±400         | 1 - 9.76                      |  |
|             |                         |                                            |                              | ±100         | 10 - 10M                      |  |
|             |                         |                                            |                              | ±200         | 10.1M - 30M                   |  |
|             |                         |                                            |                              | ±1800        | 0.01 - 0.049                  |  |

## Electrical Specifications – Ultra-high Power

| Type/Code   | Power Rating (W)<br>@ 70°C | Maximum<br>Working<br>Voltage <sup>(1)</sup> (V) | Maximum<br>Overload<br>Voltage (V) | TCR (ppm/°C) | Ohmic Range (Ω) and Tolerance |                      |
|-------------|----------------------------|--------------------------------------------------|------------------------------------|--------------|-------------------------------|----------------------|
|             |                            |                                                  |                                    |              | 0.5%                          | 1% and 5%            |
| RMCA0402-UP | 0.2                        | 50                                               | 100                                | ±400<br>±100 | -<br>10 - 1M                  | 1 - 9.76<br>10 - 10M |
| RMCA0603-UP | 0.33                       | 75                                               | 125                                | ±400<br>±100 | -<br>10 - 1M                  | 1 - 9.76<br>10 - 10M |
| RMCA0805-UP | 0.5                        | 200                                              | 300                                | ±400<br>±100 | -<br>10 - 1M                  | 1 - 9.76<br>10 - 10M |
| RMCA1206-UP | 0.75                       | 200                                              | 400                                | ±400<br>±100 | -<br>10 - 1M                  | 1 - 9.76<br>10 - 10M |
| RMCA1210-UP | 1                          |                                                  |                                    | ±400<br>±100 | -<br>10 - 1M                  | 1 - 9.76<br>10 - 10M |
| RMCA2010-UP | 1.5                        |                                                  |                                    | ±400<br>±150 | -<br>10 - 1M                  | 1 - 9.76<br>10 - 10M |
| RMCA2512-UP | 3                          |                                                  |                                    | ±400<br>±150 | -<br>10 - 1M                  | 1 - 9.76<br>10 - 10M |

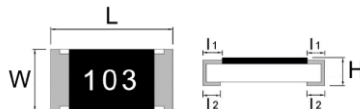
## Electrical Specifications – RMCA Jumper

| Type                        | 0201      | 0402 | 0603 | 0805 | 1206 | 1210 | 1812 | 2010 | 2512 |
|-----------------------------|-----------|------|------|------|------|------|------|------|------|
| Jumper Resistance Value (Ω) | 0.05Ω Max |      |      |      |      |      |      |      |      |
| Jumper Rated Current (A)    | 0.5       | 1    |      |      |      | 2    |      |      |      |

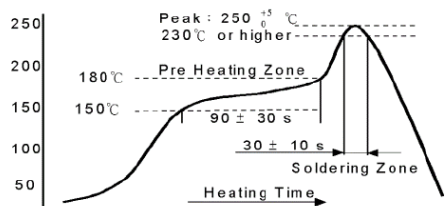
## Electrical Specifications – High Power Jumper

| Type                                               | 0402       | 0603 | 0805 | 1206 | 1210 | 1812 | 2010 | 2512 |
|----------------------------------------------------|------------|------|------|------|------|------|------|------|
| Jumper Resistance Value (Ω)                        | 0.02Ω Max. |      |      |      |      |      |      |      |
| Jumper Rated Current (A)                           | 2          | 2.5  | 3.5  | 5    | 6    | 7    | 7    | 10   |
| Max. Overload Current (A)<br>< 1 second and 1 time | 6          | 9    | 13   | 16   | 19   | 22   | 22   | 30   |

## Mechanical Specifications



| Type/Code   | L<br>Body Length | W<br>Body Width | H<br>Body Height | l <sub>1</sub><br>Top Termination | l <sub>2</sub><br>Bottom Termination | Unit   |
|-------------|------------------|-----------------|------------------|-----------------------------------|--------------------------------------|--------|
| RMCA0201    | 0.024 ± 0.001    | 0.012 ± 0.001   | 0.009 ± 0.001    | 0.004 ± 0.002                     | 0.006 ± 0.004                        | inches |
|             | 0.60 ± 0.03      | 0.30 ± 0.03     | 0.23 ± 0.03      | 0.10 ± 0.05                       | 0.15 ± 0.05                          | mm     |
| RMCA0402    | 0.039 ± 0.004    | 0.020 ± 0.002   | 0.012 ± 0.002    | 0.006 ± 0.004                     | 0.008 ± 0.004                        | inches |
|             | 1.00 ± 0.10      | 0.50 ± 0.05     | 0.30 ± 0.05      | 0.15 ± 0.10                       | 0.20 ± 0.10                          | mm     |
| RMCA0603    | 0.063 ± 0.008    | 0.031 ± 0.006   | 0.016 ± 0.004    | 0.012 ± 0.008                     | 0.012 ± 0.004                        | inches |
|             | 1.60 ± 0.20      | 0.80 ± 0.15     | 0.40 ± 0.10      | 0.30 ± 0.20                       | 0.30 ± 0.10                          | mm     |
| RMCA0805    | 0.079 ± 0.008    | 0.049 ± 0.006   | 0.020 ± 0.006    | 0.012 ± 0.006                     | 0.016 ± 0.006                        | inches |
|             | 2.00 ± 0.20      | 1.25 ± 0.15     | 0.50 ± 0.15      | 0.30 ± 0.15                       | 0.40 ± 0.15                          | mm     |
| RMCA1206    | 0.120 ± 0.004    | 0.063 ± 0.008   | 0.022 ± 0.006    | 0.016 ± 0.008                     | 0.020 ± 0.008                        | inches |
|             | 3.05 ± 0.10      | 1.60 ± 0.20     | 0.55 ± 0.15      | 0.40 ± 0.20                       | 0.50 ± 0.20                          | mm     |
| RMCA1210    | 0.120 ± 0.004    | 0.098 ± 0.008   | 0.022 ± 0.006    | 0.020 ± 0.008                     | 0.020 ± 0.008                        | inches |
|             | 3.05 ± 0.10      | 2.50 ± 0.20     | 0.55 ± 0.15      | 0.50 ± 0.20                       | 0.50 ± 0.20                          | mm     |
| RMCA2010    | 0.197 ± 0.008    | 0.098 ± 0.008   | 0.022 ± 0.004    | 0.024 ± 0.008                     | 0.024 ± 0.008                        | inches |
|             | 5.00 ± 0.20      | 2.50 ± 0.20     | 0.55 ± 0.10      | 0.60 ± 0.20                       | 0.60 ± 0.20                          | mm     |
| RMCA2512    | 0.248 ± 0.008    | 0.126 ± 0.008   | 0.022 ± 0.004    | 0.024 ± 0.008                     | 0.024 ± 0.008                        | inches |
|             | 6.30 ± 0.20      | 3.20 ± 0.20     | 0.55 ± 0.10      | 0.60 ± 0.20                       | 0.60 ± 0.20                          | mm     |
| RMCA2512-HP | 0.248 ± 0.008    | 0.126 ± 0.008   | 0.026 ± 0.006    | 0.024 ± 0.008                     | 0.024 ± 0.008                        | inches |
|             | 6.30 ± 0.20      | 3.20 ± 0.20     | 0.65 ± 0.15      | 0.60 ± 0.20                       | 0.60 ± 0.20                          | mm     |
| RMCA2512-UP | 0.248 ± 0.008    | 0.126 ± 0.008   | 0.027 ± 0.006    | 0.024 ± 0.008                     | 0.024 ± 0.008                        | inches |
|             | 6.30 ± 0.20      | 3.20 ± 0.20     | 0.68 ± 0.15      | 0.60 ± 0.20                       | 0.60 ± 0.20                          | mm     |

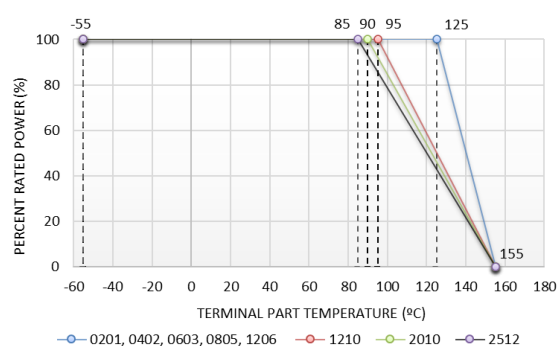
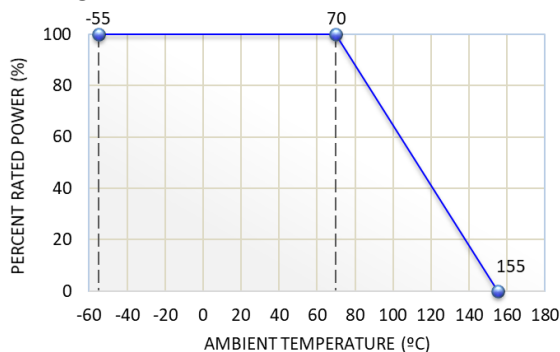
| Performance Characteristics                 |                                           |                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test                                        | Test Method                               | Test Specification                                                                                                                                   | Test Condition                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Temperature Coefficient of Resistance (TCR) | JIS C-5201-1 4.8<br>IEC-60115-1 4.8       | Refer to Electrical Specifications table                                                                                                             | At 25°C/-55°C and 25°C/+155°C, 25°C is the reference temperature, except for 0201<br>0201: at 25°C/-55°C and 25°C/+125°C                                                                                                                                                                                                                                                                                                                     |
| Short Time Overload                         | JIS-C-5201-1 4.13<br>IEC-60115-1 4.13     | $\pm 1$ : $\pm(1\% + 0.05\Omega)$<br>$\pm 5$ : $\pm(2\% + 0.1\Omega)$<br>Value < 1 $\Omega$ : $\pm(2\% + 0.1\Omega)$<br>0201: $\pm(3\% + 0.1\Omega)$ | RMCA<br>2.5 times RCWV or Max. Overload voltage, whichever is less for 5 seconds                                                                                                                                                                                                                                                                                                                                                             |
|                                             |                                           |                                                                                                                                                      | RMCA-HP<br>2.5 times RCWV or Max. Overload voltage, whichever is less for 2 seconds                                                                                                                                                                                                                                                                                                                                                          |
|                                             |                                           |                                                                                                                                                      | RMCA-UP<br>5 times Rated Power or Max. Overload voltage, whichever is less for 5 seconds                                                                                                                                                                                                                                                                                                                                                     |
| IR Reflow                                   |                                           | $\pm 1$ : $\pm(1\% + 0.05\Omega)$<br>$\pm 5$ : $\pm(1\% + 0.05\Omega)$                                                                               |  <p>The graph shows a temperature profile for IR reflow. The y-axis is temperature in °C (50 to 250), and the x-axis is heating time. Key points include: Pre Heating Zone (150°C to 180°C), a dwell at 180°C for 90 ± 30 s, a peak at 250 ± 5°C (230°C or higher), a dwell at the peak for 30 ± 10 s, and a Soldering Zone during the cooling phase.</p> |
| Leaching                                    | JIS-C-5201-1 4.18<br>IEC-60068-2-58 8.2.1 | Individual leaching area ≤ 5%<br>Total leaching area ≤ 10%                                                                                           | 260 ± 5°C for 30 seconds                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Temperature Cycling                         | JIS C-5201-1<br>clause 4.19               | 0.1%, 0.5%, 1%: $\pm(0.5\% + 0.05\Omega)$<br>5%: $\pm(1\% + 0.1\Omega)$<br>Values < 1 $\Omega$ : $\pm(1\% + 0.1\Omega)$                              | -55 to +155°C, 5 cycles                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Electric Iron                               |                                           | $\pm 1$ : $\pm(1\% + 0.05\Omega)$<br>$\pm 5$ : $\pm(1\% + 0.05\Omega)$<br>Values < 1 $\Omega$ : $\pm(1\% + 0.05\Omega)$                              | Preheating temperature: 350 ± 10°C<br>Electric iron preheating time: 3 + 1/-0 seconds                                                                                                                                                                                                                                                                                                                                                        |
| Resistance to Solvent                       | JIS C-5201-1<br>clause 4.29               | 1%: $\pm(0.5\% + 0.05\Omega)$<br>5%: $\pm(0.5\% + 0.05\Omega)$<br>Values < 1 $\Omega$ : $\pm(1\% + 0.05\Omega)$                                      | The tested resistor shall be immersed into isopropyl alcohol at 20 ~ 25°C for 60 seconds.<br>Then the resistor is left in the room for 48 hours.                                                                                                                                                                                                                                                                                             |
| Load Life and Moisture                      | JIS C-5201-1<br>clause 4.24               | 0.1%, 0.5%, 1%: $\pm(1\% + 0.05\Omega)$<br>5%: $\pm(2\% + 0.05\Omega)$<br>Values < 1 $\Omega$ : $\pm(2\% + 0.05\Omega)$                              | 40 ± 2°C, 90 ~ 95% R.H. RCWV or Max. Working Voltage, whichever is less for 1000 hours, with 1.5 hours "ON" and 0.5 hour "OFF".                                                                                                                                                                                                                                                                                                              |
| Load Life (Endurance)                       | JIS C-5201-1<br>clause 4.25               | 0.1%, 0.5%, 1%: $\pm(1\% + 0.05\Omega)$<br>5%: $\pm(3\% + 0.1\Omega)$<br>Values < 1 $\Omega$ : $\pm(3\% + 0.1\Omega)$                                | 70 ± 2°C, RCWV or Max. Working Voltage, whichever is less for 1000 hours, with 1.5 hours "ON" and 0.5 hour "OFF".                                                                                                                                                                                                                                                                                                                            |
| Insulation Resistance                       | JIS C-5201-1<br>clause 4.6                | ≥ 10GΩ                                                                                                                                               | 100 V for 1 minute                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Terminal Bending Strength                   | JIS C-5201-1<br>clause 4.33               | $\pm 1$ : $\pm(1\% + 0.05\Omega)$<br>$\pm 5$ : $\pm(1\% + 0.05\Omega)$                                                                               | Bending once for 5 seconds<br>D: 0402, 0603, 0805 = 5 mm<br>1206, 1210 = 3 mm<br>2010, 2512 = 2 mm                                                                                                                                                                                                                                                                                                                                           |
| Sulfur Test (FoS)                           | ATSM B809-95<br>ANSI/EIZ-977              | For standard and high power products:<br>$\pm(1\% + 0.05\Omega)$                                                                                     | 60 ± 2°C, no power rating for 1000 hours                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                             |                                           | For ultra high power products:<br>$\pm(1\% + 0.05\Omega)$                                                                                            | 105 ± 2°C, no power rating for 1000 hours                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                             |                                           | For 0201 0.5% and 1%:<br>$\pm(1\% + 0.05\Omega)$                                                                                                     | 105 ± 2°C, no power rating for 360 hours                                                                                                                                                                                                                                                                                                                                                                                                     |

Operating temperature range is -55 to +155°C

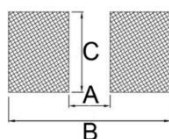
| AEC-Q200 Test                       |                                                |                                                                                                                                                 |                                                                                                                                                                                                                                  |
|-------------------------------------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test                                | Test Method                                    | Test Specification                                                                                                                              | Test Condition                                                                                                                                                                                                                   |
| Temperature Cycling                 | JESD22<br>Method JA-104                        | 0.1%, 0.5%, 1%: $\pm(0.5\% + 0.05\Omega)$<br>5%: $\pm(1\% + 0.1\Omega)$                                                                         | 1000 cycles (-55 to +125°C)<br>*Measurement at 24 ± 4 hours after test conclusion.<br>30 min. maximum dwell time at each temperature extreme.<br>1 min. maximum transition time.                                                 |
| Resistance to Solvent               | MIL-STD-202<br>Method 215                      | 1%: $\pm(0.5\% + 0.05\Omega)$<br>5%: $\pm(0.5\% + 0.05\Omega)$                                                                                  | Add aqueous wash chemical - OKEM clean or equivalent<br>a. Isopropyl Alcohol: Mineral Spirits = 1:3<br>b. Terpene Defluxer (Bioact EC-7R)<br>c. Deionized water: Propylene Glycol<br>Monomethyl Ether: monoethanolamide = 42:1:1 |
| Biased Humidity                     | MIL-STD-202<br>Method 103                      | 0.1%, 0.5%, 1%: $\pm(1\% + 0.05\Omega)$<br>5%: $\pm(3\% + 0.05\Omega)$                                                                          | 1000 hours 85°C/85% R.H.<br>10% of operation power.<br>Measurement at 24 ± 4 hours after test conclusion                                                                                                                         |
| High Temperature Exposure (Storage) | MIL-STD-202<br>Method 108                      | 0.1%, 0.5%, 1%: $\pm(0.5\% + 0.05\Omega)$<br>5%: $\pm(2\% + 0.05\Omega)$                                                                        | 1000 hours. T=155°C Unpowered.<br>0201: 1000 hours. T=125°C Unpowered.<br>Measurement at 24 ± 2 hours after test conclusion                                                                                                      |
| Operational Life                    | MIL-STD-202<br>Method 108                      | 0.1%, 0.5%, 1%: $\pm(1\% + 0.05\Omega)$<br>5%: $\pm(3\% + 0.1\Omega)$<br>0201: $\pm(5\% + 0.1\Omega)$                                           | Condition D steady state TA = 125°C at derated power.<br>0201: 1000 hours TA = 125°C at 35% rated power.<br>Measurement at 24 ± 4 hours after test conclusion.                                                                   |
| External Visual                     | MIL-STD-883<br>Method 2009                     | -                                                                                                                                               | Electrical test not required.<br>Inspect device construction, marking and workmanship.                                                                                                                                           |
| Physical Dimension                  | AEC-Q200 REV D Test 10<br>JESD22 Method JB-100 | -                                                                                                                                               | Verify physical dimensions to the applicable device detail specification. Note: User(s) and suppliers spec.<br>Electrical test not required                                                                                      |
| Mechanical Shock                    | MIL-STD-202<br>Method 213                      | $\pm 1$ : $\pm(1\% + 0.05\Omega)$<br>$\pm 5$ : $\pm(2\% + 0.1\Omega)$                                                                           | Wave Form: Tolerance for half sine shock pulse.<br>Peak value is 100 g. Normal duration is 6(ms)                                                                                                                                 |
| Vibration                           | MIL-STD-202<br>Method 204                      | $\pm 1$ : $\pm(1\% + 0.05\Omega)$<br>$\pm 5$ : $\pm(2\% + 0.1\Omega)$                                                                           | 5 g for 20 minutes<br>12 cycles each of 3 orientations.<br>Note: Test from 10-2000 hours                                                                                                                                         |
| Resistance to Soldering Heat        | JIS-C-5201-1 4.18<br>IEC-60068-2-58 8.2.1      | $\pm 1$ : $\pm(0.5\% + 0.05\Omega)$<br>$\pm 5$ : $\pm(1\% + 0.05\Omega)$<br>Value < 1Ω: $\pm(1\% + 0.05\Omega)$<br>0201: $\pm(2\% + 0.1\Omega)$ | 260 ± 5°C for 10 seconds                                                                                                                                                                                                         |
| ESD                                 | AEC-Q200-002 or<br>ISO/DIS 10605               | $\pm(3\% + 0.05\Omega)$                                                                                                                         | Human body model<br>0201: 500 V<br>0402/0603: 1 KV<br>0805 and above: 2 KV                                                                                                                                                       |
| Solderability                       | J-STD-002                                      | $\pm 1$ : $\pm(0.5\% + 0.05\Omega)$<br>$\pm 5$ : $\pm(1\% + 0.05\Omega)$                                                                        | Method B, aging 4 hours at 155°C dry heat. Lead-free solder bath at 235 ± 3°C. Dipping time: 3 ± 0.5 seconds                                                                                                                     |
| Flammability                        | AEC-Q200 REV D Test 20<br>UL-94                | V-0 or V-1                                                                                                                                      | V-0 or V-1 are acceptable. Electrical test not required.                                                                                                                                                                         |
| Terminal Strength (SMD)             | AEC Q200-006                                   | No breakage                                                                                                                                     | Pressurizing force for 60 seconds<br>0402 / 0603: 8 N<br>0805 and above: 17.7 N                                                                                                                                                  |
| Board Flex                          | AEC Q200-005                                   | $\pm(1\% + 0.05\Omega)$                                                                                                                         | Bending once for 60 seconds.<br>2010, 2512 sizes: 2 mm; other sizes: 3 mm                                                                                                                                                        |

RCWV: Rated continuous working voltage

### Power Derating Curve:



## Recommended Pad Layout



| Type/Code | A     | B     | C     | Unit   |
|-----------|-------|-------|-------|--------|
| RMCA0201  | 0.012 | 0.035 | 0.016 | inches |
|           | 0.30  | 0.90  | 0.40  | mm     |
| RMCA0402  | 0.024 | 0.063 | 0.028 | inches |
|           | 0.60  | 1.60  | 0.70  | mm     |
| RMCA0603  | 0.031 | 0.094 | 0.039 | inches |
|           | 0.80  | 2.40  | 1.00  | mm     |
| RMCA0805  | 0.051 | 0.114 | 0.055 | inches |
|           | 1.30  | 2.90  | 1.40  | mm     |
| RMCA1206  | 0.087 | 0.165 | 0.067 | inches |
|           | 2.20  | 4.20  | 1.70  | mm     |
| RMCA1210  | 0.079 | 0.173 | 0.106 | inches |
|           | 2.00  | 4.40  | 2.70  | mm     |
| RMCA2010  | 0.150 | 0.260 | 0.106 | inches |
|           | 3.80  | 6.60  | 2.70  | mm     |
| RMCA2512  | 0.193 | 0.319 | 0.134 | inches |
|           | 4.90  | 8.10  | 3.40  | mm     |

## Recommended Solder Profile

This information is intended as a reference for solder profiles for Stackpole resistive components. These profiles should be compatible with most soldering processes. These are only recommendations. Actual numbers will depend on board density, geometry, packages used, etc., especially those cells labeled with “\*”.

## 100% Matte Tin / RoHS Compliant Terminations

Soldering iron recommended temperatures: 330 to 350°C with minimum duration.  
Maximum number of reflow cycles: 3.

## Wave Soldering

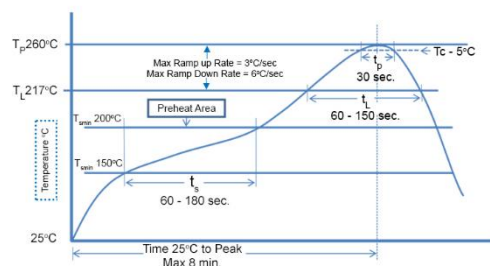
| Description        | Maximum    | Recommended | Minimum    |
|--------------------|------------|-------------|------------|
| Preheat Time       | 80 seconds | 70 seconds  | 60 seconds |
| Temperature Diff.  | 140°C      | 120°C       | 100°C      |
| Solder Temp.       | 260°C      | 250°C       | 240°C      |
| Dwell Time at Max. | 10 seconds | 5 seconds   | *          |
| Ramp DN (°C/sec)   | N/A        | N/A         | N/A        |

Temperature Diff. = Difference between final preheat stage and soldering stage.

## Convection IR Reflow

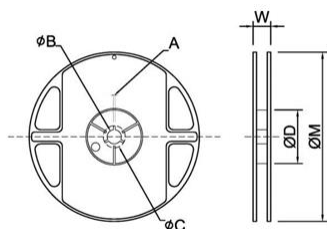
| Description        | Maximum     | Recommended | Minimum    |
|--------------------|-------------|-------------|------------|
| Ramp Up (°C/sec)   | 3°C/sec     | 2°C/sec     | *          |
| Dwell Time > 217°C | 150 seconds | 90 seconds  | 60 seconds |
| Solder Temp.       | 260°C       | 245°C       | *          |
| Dwell Time at Max. | 30 seconds  | 15 seconds  | 10 seconds |
| Ramp DN (°C/sec)   | 6°C/sec     | 3°C/sec     | *          |

## Recommended Resistor Reflow Profile



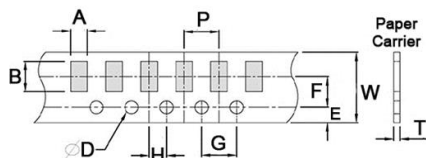
## Packaging (EIA Standard RS-481)

### Reel Specifications



| Size                     | Size | A    | B                             | C                             | D                             | W                             | M                              | Unit         |
|--------------------------|------|------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--------------------------------|--------------|
| 0201                     | 7"   | 10 K | 0.512 ± 0.039<br>13.00 ± 1.00 |                               |                               | 0.453 ± 0.079<br>11.50 ± 2.00 |                                | inches<br>mm |
| 0402                     | 7"   | 10 K |                               |                               |                               | 0.453 ± 0.079<br>11.50 ± 2.00 |                                | inches<br>mm |
| 0603, 0805<br>1206, 1210 | 7"   | 5 K  | 0.531 ± 0.039<br>13.50 ± 1.00 | 0.827 ± 0.039<br>21.00 ± 1.00 | 2.362 ± 0.039<br>60.00 ± 1.00 | 0.453 ± 0.079<br>11.50 ± 2.00 | 7.008 ± 0.079<br>178.00 ± 2.00 | inches<br>mm |
| 2010 and 2512            | 7"   | 4 K  |                               |                               |                               | 0.630 ± 0.079<br>16.00 ± 2.00 |                                | inches<br>mm |

### Packaging Specifications – Paper Tape

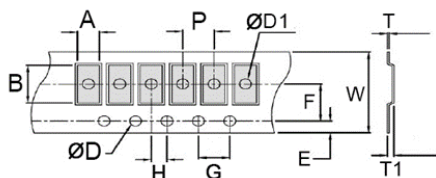


| Size     | A                            | B                            | W                            | E                            | F                            | Unit         |
|----------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|--------------|
| RMCA0201 | 0.015 ± 0.002<br>0.37 ± 0.05 | 0.026 ± 0.004<br>0.67 ± 0.10 |                              |                              |                              | inches<br>mm |
| RMCA0402 | 0.028 ± 0.004<br>0.70 ± 0.10 | 0.047 ± 0.004<br>1.20 ± 0.10 |                              |                              |                              | inches<br>mm |
| RMCA0603 | 0.041 ± 0.008<br>1.05 ± 0.20 | 0.071 ± 0.008<br>1.80 ± 0.20 |                              |                              |                              | inches<br>mm |
| RMCA0805 | 0.061 ± 0.008<br>1.55 ± 0.20 | 0.091 ± 0.008<br>2.30 ± 0.20 | 0.315 ± 0.008<br>8.00 ± 0.20 | 0.069 ± 0.004<br>1.75 ± 0.10 | 0.138 ± 0.002<br>3.50 ± 0.05 | inches<br>mm |
| RMCA1206 | 0.075 ± 0.008<br>1.90 ± 0.20 | 0.138 ± 0.008<br>3.50 ± 0.20 |                              |                              |                              | inches<br>mm |
| RMCA1210 | 0.112 ± 0.008<br>2.85 ± 0.20 | 0.138 ± 0.008<br>3.50 ± 0.20 |                              |                              |                              | inches<br>mm |

## Packaging Specifications – Paper Tape (cont.)

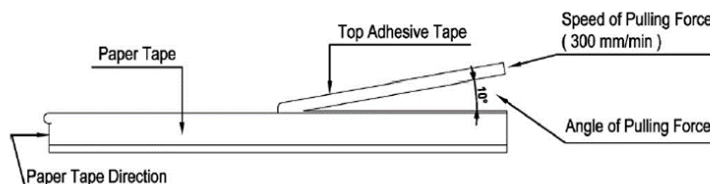
| Size     | G                            | H                            | T                            | D                               | P                            | Unit         |
|----------|------------------------------|------------------------------|------------------------------|---------------------------------|------------------------------|--------------|
| RMCA0201 | 0.157 ± 0.004<br>4.00 ± 0.10 | 0.079 ± 0.002<br>2.00 ± 0.05 | 0.015 ± 0.004<br>0.37 ± 0.10 | 0.059 +0.004/-0<br>1.50 +0.1/-0 | 0.079 ± 0.002<br>2.00 ± 0.05 | inches<br>mm |
| RMCA0402 |                              |                              | 0.018 ± 0.004<br>0.45 ± 0.10 |                                 | 0.079 ± 0.004<br>2.00 ± 0.10 | inches<br>mm |
| RMCA0603 |                              |                              | 0.024 ± 0.004<br>0.60 ± 0.10 |                                 | 0.157 ± 0.004<br>4.00 ± 0.10 | inches<br>mm |
| RMCA0805 |                              |                              | 0.030 ± 0.004<br>0.75 ± 0.10 |                                 | 0.157 ± 0.004<br>4.00 ± 0.10 | inches<br>mm |
| RMCA1206 |                              |                              | 0.030 ± 0.004<br>0.75 ± 0.10 |                                 | 0.157 ± 0.004<br>4.00 ± 0.10 | inches<br>mm |
| RMCA1210 |                              |                              | 0.030 ± 0.004<br>0.75 ± 0.10 |                                 | 0.157 ± 0.004<br>4.00 ± 0.10 | inches<br>mm |

## Packaging Specifications – Plastic Tape



| Size                       | A                            | B                            | W                                | E                            | F                            | G                            | Unit         |
|----------------------------|------------------------------|------------------------------|----------------------------------|------------------------------|------------------------------|------------------------------|--------------|
| RMCA2010                   | 0.110 ± 0.008<br>2.80 ± 0.20 | 0.220 ± 0.008<br>5.60 ± 0.20 | 0.472 ± 0.004<br>12.00 ± 0.10    | 0.069 ± 0.004<br>1.75 ± 0.10 | 0.217 ± 0.002<br>5.50 ± 0.05 | 0.157 ± 0.004<br>4.00 ± 0.10 | inches<br>mm |
| RMCA2512<br>(-HP and -UP)  | 0.134 ± 0.008<br>3.40 ± 0.20 | 0.264 ± 0.008<br>6.70 ± 0.20 |                                  |                              |                              |                              | inches<br>mm |
| Size                       | H                            | T                            | D                                | D1                           | T1                           | P                            | Unit         |
| RMCA2010                   | 0.079 ± 0.002<br>2.00 ± 0.05 | 0.009 ± 0.004<br>0.23 ± 0.10 | 0.059 +0.004/-0<br>1.50 +0.10/-0 | 0.059 ± 0.004<br>1.50 ± 0.10 | 0.033 ± 0.006<br>0.85 ± 0.15 | 0.157 ± 0.004<br>4.00 ± 0.10 | inches<br>mm |
| RMCA2512                   |                              |                              |                                  |                              | 0.033 ± 0.006<br>0.85 ± 0.15 |                              | inches<br>mm |
| RMCA2512-HP<br>RMCA2512-UP |                              |                              |                                  |                              | 0.037 ± 0.006<br>0.95 ± 0.15 |                              | inches<br>mm |

## Peel-Off Strength Specifications



Top Adhesive Peel-off Strength: 10 g ~ 70 g.

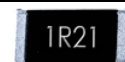
## Part Marking Instructions

### Sizes 0805-2512, 0.1%, 0.5% and 1% tolerances (E96 and E24 Values)

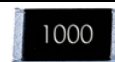
The nominal resistance is marked on the surface of the overcoating with the use of

**four character markings.**

1. Values <100Ω will use "R" as the decimal holder.



1.21Ω



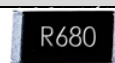
100Ω

### Sizes 0805-2512, 5% tolerance, ≤ 0.91Ω (E24 Values)

The nominal resistance is marked on the surface of the overcoating with the use of

**four character markings.**

1. Values ≤ 0.91Ω will use "R" as the decimal holder.



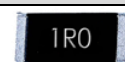
0.68Ω

### Sizes 0805-2512, 5% tolerance, ≥ 1Ω (E24 Values)

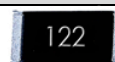
The nominal resistance is marked on the surface of the overcoating with the use of

**three character markings.**

1. Values between 1Ω and 9.1Ω will use "R" as the decimal holder.



1Ω



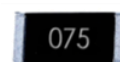
1.2 KΩ

### Size 0603 (E24 Values)

The nominal resistance is marked on the surface of the overcoating with the use of

**three character markings.**

1. Values between 0.075Ω and 0.091Ω will use no decimal holder.
2. Values between 0.1Ω and 9.1Ω will use "R" as the decimal holder.
3. Values ≥10Ω will use no decimal holder.
4. 5% tolerance is not underlined. 1% tolerance is underlined.
- (Effective date for 1% underline marking is date codes on/or after April 1, 2025.
5. Values that are both E24 and E96 follow E96 marking rules.



0.075Ω 5%



0.68Ω 5%

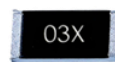


220Ω 1%

### Size 0603 (E96 Values)

A two character number is assigned to each standard R-Value (E96) as shown in the chart below. This is followed by one alpha character which is used as a multiplier.

Each letter from "Y" - "F" represents a specific multiplier.



10.5Ω

| Alpha Character = Multiplier |             |
|------------------------------|-------------|
| Y = 0.1                      | C = 1000    |
| X = 1                        | D = 10000   |
| A = 10                       | E = 100000  |
| B = 100                      | F = 1000000 |

| Chip Marking | Value                 |
|--------------|-----------------------|
| 01B =        | 10.0 x 100 = 1 KΩ     |
| 25C =        | 17.8 x 1000 = 17.8 KΩ |
| 93D =        | 90.9 x 10000 = 909 KΩ |

### E96

| #  | R-Value | #  | R-Value | #  | R-Value | #  | R-Value | #  | R-Value | #  | R-Value |
|----|---------|----|---------|----|---------|----|---------|----|---------|----|---------|
| 01 | 10.0    | 17 | 14.7    | 33 | 21.5    | 49 | 31.6    | 65 | 46.4    | 81 | 68.1    |
| 02 | 10.2    | 18 | 15.0    | 34 | 22.1    | 50 | 32.4    | 66 | 47.5    | 82 | 69.8    |
| 03 | 10.5    | 19 | 15.4    | 35 | 22.6    | 51 | 33.2    | 67 | 48.7    | 83 | 71.5    |
| 04 | 10.7    | 20 | 15.8    | 36 | 23.2    | 52 | 34.0    | 68 | 49.9    | 84 | 73.2    |
| 05 | 11.0    | 21 | 16.2    | 37 | 23.7    | 53 | 34.8    | 69 | 51.1    | 85 | 75.0    |
| 06 | 11.3    | 22 | 16.5    | 38 | 24.3    | 54 | 35.7    | 70 | 52.3    | 86 | 76.8    |
| 07 | 11.5    | 23 | 16.9    | 39 | 24.9    | 55 | 36.5    | 71 | 53.6    | 87 | 78.7    |
| 08 | 11.8    | 24 | 17.4    | 40 | 25.5    | 56 | 37.4    | 72 | 54.9    | 88 | 80.6    |
| 09 | 12.1    | 25 | 17.8    | 41 | 26.1    | 57 | 38.3    | 73 | 56.2    | 89 | 82.5    |
| 10 | 12.4    | 26 | 18.2    | 42 | 26.7    | 58 | 39.2    | 74 | 57.6    | 90 | 84.5    |
| 11 | 12.7    | 27 | 18.7    | 43 | 27.4    | 59 | 40.2    | 75 | 59.0    | 91 | 86.6    |
| 12 | 13.0    | 28 | 19.1    | 44 | 28.0    | 60 | 41.2    | 76 | 60.4    | 92 | 88.7    |
| 13 | 13.3    | 29 | 19.6    | 45 | 28.7    | 61 | 42.2    | 77 | 61.9    | 93 | 90.9    |
| 14 | 13.7    | 30 | 20.0    | 46 | 29.4    | 62 | 43.2    | 78 | 63.4    | 94 | 93.1    |
| 15 | 14.0    | 31 | 20.5    | 47 | 30.1    | 63 | 44.2    | 79 | 64.9    | 95 | 95.3    |
| 16 | 14.3    | 32 | 21.0    | 48 | 30.9    | 64 | 45.3    | 80 | 66.5    | 96 | 97.6    |

Note: 0201 and 0402 sizes are unmarked.

## RoHS Compliance

Stackpole Electronics has joined the worldwide effort to reduce the amount of lead in electronic components and to meet the various regulatory requirements now prevalent, such as the European Union's directive regarding "Restrictions on Hazardous Substances" (RoHS 3). As part of this ongoing program, we periodically update this document with the status regarding the availability of our compliant components. All our standard part numbers are compliant to EU Directive 2011/65/EU of the European Parliament as amended by Directive (EU) 2015/863/EU as regards the list of restricted substances.

| RoHS Compliance Status  |                                                                         |                            |                                                  |                                   |                                                    |                                       |
|-------------------------|-------------------------------------------------------------------------|----------------------------|--------------------------------------------------|-----------------------------------|----------------------------------------------------|---------------------------------------|
| Standard Product Series | Description                                                             | Package / Termination Type | Standard Series RoHS Compliant                   | Lead-Free Termination Composition | Lead-Free Mfg. Effective Date (Std Product Series) | Lead-Free Effective Date Code (YY/WW) |
| RMCA                    | Automotive Grade Anti-Sulfur and AEC Qualified Thick Film Chip Resistor | SMD                        | YES<br>RoHS Compliant by means of exemption 7c-I | 100% Matte Sn over Ni             | Always                                             | Always                                |

## "Conflict Metals" Commitment

We at Stackpole Electronics, Inc. are joined with our industry in opposing the use of metals mined in the "conflict region" of the eastern Democratic Republic of the Congo (DRC) in our products. Recognizing that the supply chain for metals used in the electronics industry is very complex, we work closely with our own suppliers to verify to the extent possible that the materials and products we supply do not contain metals sourced from this conflict region. As such, we are in compliance with the requirements of Dodd-Frank Act regarding Conflict Minerals.

## Compliance to "REACH"

We certify that all passive components supplied by Stackpole Electronics, Inc. are SVHC (Substances of Very High Concern) free and compliant with the requirements of EU Directive 1907/2006/EC, "The Registration, Evaluation, Authorization and Restriction of Chemicals", otherwise referred to as REACH. Contact us for complete list of REACH Substance Candidate List.

## Environmental Policy

It is the policy of Stackpole Electronics, Inc. (SEI) to protect the environment in all localities in which we operate. We continually strive to improve our effect on the environment. We observe all applicable laws and regulations regarding the protection of our environment and all requests related to the environment to which we have agreed. We are committed to the prevention of all forms of pollution.

## How to Order

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | M | C | A | 0 | 4 | 0 | 2 | F | T | 1 | R | 0 | 0 | - | H | P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| Product Series |                                            | Size and Wattage |       |       |       | Tolerance |        | Packaging |                      |            |          | Resistance Value                                                                                                                                                                                                                             |  | Special |                  |
|----------------|--------------------------------------------|------------------|-------|-------|-------|-----------|--------|-----------|----------------------|------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------|------------------|
| Code           | Description                                | Code             | Std W | -HP W | -UP W | Code      | Tol    | Code      | Description          | Size       | Quantity | Four characters with the multiplier used as the decimal holder. "L" used as multiplier of 10 <sup>-3</sup> for any value under 0.1 ohm.<br>0.010 ohm = 10L0<br>3.9 ohm = 3R90<br>10 Kohm = 10K0<br>1.1 Mohm = 1M10<br>Zero ohm jumper = 0R00 |  | Code    | Description      |
| RMCA           | Automotive Grade Thick Film Chip Resistors | 0201             | 0.05  | -     | -     | B         | 0.1%   | T         | 7" Reel Paper Tape   | 0201, 0402 | 10000    |                                                                                                                                                                                                                                              |  | blank   | Standard         |
|                |                                            | 0402             | 0.063 | 0.1   | 0.2   | D         | 0.5%   |           |                      | 0603, 0805 | 5000     |                                                                                                                                                                                                                                              |  | -HP     | High Power       |
|                |                                            | 0603             | 0.1   | 0.125 | 0.33  | F         | 1%     |           | 7" Reel Plastic Tape | 1206, 1210 |          |                                                                                                                                                                                                                                              |  | -UP     | Ultra-high Power |
|                |                                            | 0805             | 0.125 | 0.25  | 0.5   | J         | 5%     |           |                      | 2010, 2512 | 4000     |                                                                                                                                                                                                                                              |  |         |                  |
|                |                                            | 1206             | 0.25  | 0.5   | 0.75  | Z         | Jumper |           |                      |            |          |                                                                                                                                                                                                                                              |  |         |                  |
|                |                                            | 1210             | 0.5   | 0.66  | 1     |           |        |           |                      |            |          |                                                                                                                                                                                                                                              |  |         |                  |
|                |                                            | 2010             | 0.75  | 1     | 1.5   |           |        |           |                      |            |          |                                                                                                                                                                                                                                              |  |         |                  |
|                |                                            | 2512             | 1     | 2     | 3     |           |        |           |                      |            |          |                                                                                                                                                                                                                                              |  |         |                  |

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|                                       |                                       |                                       |                                       |                                       |
|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| <a href="#"><u>RMCA0805FT2K26</u></a> | <a href="#"><u>RMCA0805FT2K37</u></a> | <a href="#"><u>RMCA0805FT2K40</u></a> | <a href="#"><u>RMCA0805FT2K43</u></a> | <a href="#"><u>RMCA0805FT2K67</u></a> |
| <a href="#"><u>RMCA0805FT2K94</u></a> | <a href="#"><u>RMCA0805FT301R</u></a> | <a href="#"><u>RMCA0805FT30K0</u></a> | <a href="#"><u>RMCA0805FT30K1</u></a> | <a href="#"><u>RMCA0805FT30R1</u></a> |
| <a href="#"><u>RMCA0805FT30R9</u></a> | <a href="#"><u>RMCA0805FT330R</u></a> | <a href="#"><u>RMCA0805FT332K</u></a> | <a href="#"><u>RMCA0805FT33R0</u></a> | <a href="#"><u>RMCA0805FT33R2</u></a> |
| <a href="#"><u>RMCA0805FT34R8</u></a> | <a href="#"><u>RMCA0805FT357K</u></a> | <a href="#"><u>RMCA0805FT35K7</u></a> | <a href="#"><u>RMCA0805FT35R7</u></a> | <a href="#"><u>RMCA0805FT360K</u></a> |
| <a href="#"><u>RMCA0805FT360R</u></a> | <a href="#"><u>RMCA0805FT365R</u></a> | <a href="#"><u>RMCA0805FT37K4</u></a> | <a href="#"><u>RMCA0805FT37R4</u></a> | <a href="#"><u>RMCA0805FT383R</u></a> |
| <a href="#"><u>RMCA0805FT38K3</u></a> | <a href="#"><u>RMCA0805FT390K</u></a> | <a href="#"><u>RMCA0805FT39K0</u></a> | <a href="#"><u>RMCA0805FT3K32</u></a> | <a href="#"><u>RMCA0805FT3K40</u></a> |
| <a href="#"><u>RMCA0805FT3K83</u></a> | <a href="#"><u>RMCA0805FT41K2</u></a> | <a href="#"><u>RMCA0805FT422R</u></a> | <a href="#"><u>RMCA0805FT430R</u></a> | <a href="#"><u>RMCA0805FT453K</u></a> |
| <a href="#"><u>RMCA0805FT45K3</u></a> | <a href="#"><u>RMCA0805FT464R</u></a> | <a href="#"><u>RMCA0805FT46K4</u></a> | <a href="#"><u>RMCA0805FT46R4</u></a> | <a href="#"><u>RMCA0805FT47K0</u></a> |
| <a href="#"><u>RMCA0805FT47K5</u></a> | <a href="#"><u>RMCA0805FT47R0</u></a> | <a href="#"><u>RMCA0805FT487K</u></a> | <a href="#"><u>RMCA0805FT487R</u></a> | <a href="#"><u>RMCA0805FT48R7</u></a> |
| <a href="#"><u>RMCA0805FT4K22</u></a> | <a href="#"><u>RMCA0805FT4K70</u></a> | <a href="#"><u>RMCA0805FT4K75</u></a> | <a href="#"><u>RMCA0805FT51R1</u></a> | <a href="#"><u>RMCA0805FT523R</u></a> |
| <a href="#"><u>RMCA0805FT52K3</u></a> | <a href="#"><u>RMCA0805FT536K</u></a> | <a href="#"><u>RMCA0805FT536R</u></a> | <a href="#"><u>RMCA0805FT53K6</u></a> | <a href="#"><u>RMCA0805FT549R</u></a> |
| <a href="#"><u>RMCA0805FT562K</u></a> | <a href="#"><u>RMCA0805FT56K0</u></a> | <a href="#"><u>RMCA0805FT56K2</u></a> | <a href="#"><u>RMCA0805FT576K</u></a> | <a href="#"><u>RMCA0805FT576R</u></a> |
| <a href="#"><u>RMCA0805FT57R6</u></a> | <a href="#"><u>RMCA0805FT59R0</u></a> | <a href="#"><u>RMCA0805FT5K76</u></a> | <a href="#"><u>RMCA0805FT604K</u></a> | <a href="#"><u>RMCA0805FT604R</u></a> |
| <a href="#"><u>RMCA0805FT60R4</u></a> | <a href="#"><u>RMCA0805FT619R</u></a> | <a href="#"><u>RMCA0805FT61R9</u></a> | <a href="#"><u>RMCA0805FT620K</u></a> | <a href="#"><u>RMCA0805FT63R4</u></a> |
| <a href="#"><u>RMCA0805FT64K9</u></a> | <a href="#"><u>RMCA0805FT64R9</u></a> | <a href="#"><u>RMCA0805FT66K5</u></a> | <a href="#"><u>RMCA0805FT680R</u></a> | <a href="#"><u>RMCA0805FT698R</u></a> |
| <a href="#"><u>RMCA0805FT6K04</u></a> | <a href="#"><u>RMCA0805FT6K49</u></a> | <a href="#"><u>RMCA0805FT715K</u></a> | <a href="#"><u>RMCA0805FT73K2</u></a> | <a href="#"><u>RMCA0805FT73R2</u></a> |
| <a href="#"><u>RMCA0805FT750K</u></a> | <a href="#"><u>RMCA0805FT75K0</u></a> | <a href="#"><u>RMCA0805FT768K</u></a> | <a href="#"><u>RMCA0805FT78R7</u></a> | <a href="#"><u>RMCA0805FT7K87</u></a> |
| <a href="#"><u>RMCA0805FT806R</u></a> | <a href="#"><u>RMCA0805FT80R6</u></a> | <a href="#"><u>RMCA0805FT820K</u></a> | <a href="#"><u>RMCA0805FT82K5</u></a> | <a href="#"><u>RMCA0805FT845K</u></a> |
| <a href="#"><u>RMCA0805FT86K6</u></a> | <a href="#"><u>RMCA0805FT8K66</u></a> | <a href="#"><u>RMCA0805FT8K87</u></a> | <a href="#"><u>RMCA0805FT909K</u></a> | <a href="#"><u>RMCA0805FT90K9</u></a> |
| <a href="#"><u>RMCA0805FT910R</u></a> | <a href="#"><u>RMCA0805FT93R1</u></a> | <a href="#"><u>RMCA0805FT953R</u></a> | <a href="#"><u>RMCA0805FT95K3</u></a> | <a href="#"><u>RMCA0805FT976K</u></a> |