



# Metal thin film chip resistors (precision)

## RR series

### Features

- Precision chip resistors excellent in resistance tolerance, TCR, frequency performance, noise characteristics, and linearity.
- \* This product is not currently recommended for use in new design systems. Production may be discontinued in the near future.

### Applications

- Consumer electronics that requires precision resistors
- All purpose resistors in any area of electronics

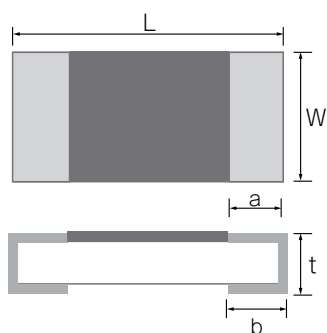
## Part numbering system

|                                                                                                |                                          |  |  |                      |                                                       |                                                     |
|------------------------------------------------------------------------------------------------|------------------------------------------|--|--|----------------------|-------------------------------------------------------|-----------------------------------------------------|
| Series code                                                                                    | <b>RR 0816 P - 102 - D - (M) - (***)</b> |  |  |                      |                                                       | only given to 3 digit coders for RR0816 E-96 series |
| Size: RR0510, RR0816, RR1220,                                                                  |                                          |  |  |                      |                                                       |                                                     |
| Temperature coefficient of resistance                                                          |                                          |  |  |                      |                                                       |                                                     |
| Nominal Resistance RR0510, RR0816, RR1220 E-24: 3 digit, RR0510, RR0816, RR1220 E-96: 4 digit, |                                          |  |  |                      | Letter M is added for RR1220 E-96 series 4digit codes |                                                     |
|                                                                                                |                                          |  |  | Resistance tolerance |                                                       |                                                     |

## Electrical Specification

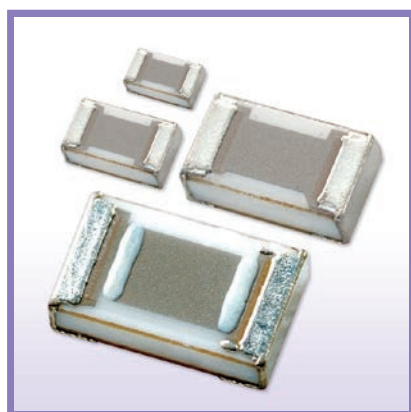
| Type   | Power ratings | Temperature coefficient of resistance | Resistance range(Ω) Resistance tolerance |            |         | Maximum voltage | Resistance value series | Operating temperature | Packaging quantity |
|--------|---------------|---------------------------------------|------------------------------------------|------------|---------|-----------------|-------------------------|-----------------------|--------------------|
|        |               | (ppm/°C)                              | ±0.1% (B)                                | ±0.5% (D)  | ±1% (F) |                 |                         |                       |                    |
| RR0510 | 1/16W         | ±25(P)                                | —                                        | 100≤R≤100k | —       | 25V             | E-24, E-96              | -55°C ~ 125°C         | 10,000pcs          |
|        |               | ±100(R)                               |                                          | 10≤R<100   |         |                 |                         |                       |                    |
| RR0816 | 1/16W         | ±25(P)                                | —                                        | 100≤R≤360k | —       | 75V             |                         |                       | 5,000pcs           |
|        |               | ±50(Q)                                |                                          | 10≤R<100   |         |                 |                         |                       |                    |
| RR1220 | 1/10W         | ±25(P)                                | —                                        | 100≤R≤1M   | —       | 100V            |                         |                       |                    |
|        |               | ±50(Q)                                | —                                        | 10≤R<100   | —       |                 |                         |                       |                    |

## Dimensions



| Type   | Size (inch) | L         | W         | a         | b         | t         |
|--------|-------------|-----------|-----------|-----------|-----------|-----------|
| RR0510 | 0402        | 1.00±0.05 | 0.50±0.05 | 0.20±0.10 | 0.25±0.05 | 0.35±0.05 |
| RR0816 | 0603        | 1.60±0.20 | 0.80±0.20 | 0.30±0.20 | 0.30±0.20 | 0.40±0.10 |
| RR1220 | 0805        | 2.00±0.20 | 1.25±0.20 | 0.40±0.20 | 0.40±0.20 | 0.40±0.10 |

(unit : mm)



# Metal thin film trimmable chip resistors

■ RT series

AEC-Q200 Compliant

## Features

- Patented trimming method (Patent# 1921853) guarantees precision trimming, post trimming stability and short trimming time.
- Available as small as 0.3mm x 0.6mm

## Applications

- Sensor circuits that require accuracy (e.g. automotive electronics)
- PA module of mobile phone
- Devices that requires anti-vibration stability (e.g. microphone)

Thin film surface mount resistors

RT series

## ◆ Part numbering system

**RT 0816 P - 102 - M**

Series code

Size: RT0603, RT0510, RT0816, RT1220

Temperature coefficient of resistance

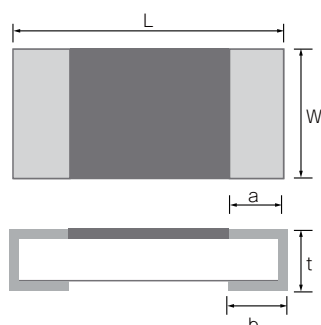
Resistance tolerance

Nominal resistance value

## ◆ Electrical Specification

| Type   | Power ratings | Temperature coefficient of resistance | Initial resistance value (Ω)   |      |      |      | Initial resistance value tolerance | Maximum voltage | Operating temperature | Packaging quantity |          |
|--------|---------------|---------------------------------------|--------------------------------|------|------|------|------------------------------------|-----------------|-----------------------|--------------------|----------|
|        |               | (ppm/°C)                              | Targetted resistance value (Ω) |      |      |      | (%)                                |                 |                       |                    |          |
| RT0603 | 1/20W         | ±25(P)                                | 150                            | 330  | -    | -    | ±20(M)                             | 15V             | -55℃ ~ 125℃           | 15,000pcs          |          |
|        |               |                                       | 1.0k                           | 1.9k | -    | -    |                                    |                 |                       |                    |          |
|        |               | ±100(R)                               | 1.5k                           | -    | -    | -    |                                    | 25V             |                       | 10,000pcs          |          |
|        |               |                                       | 10k                            | -    | -    | -    |                                    |                 |                       |                    |          |
| RT0510 | 1/16W         | ±25(P)                                | 100                            | 270  | -    | -    |                                    | 75V             |                       | 5,000pcs           |          |
|        |               |                                       | 820                            | 2.1k | -    | -    |                                    |                 |                       |                    |          |
|        |               | ±100(R)                               | 1.5k                           | -    | -    | -    |                                    | 100V            |                       | 5,000pcs           |          |
|        |               |                                       | 10k                            | -    | -    | -    |                                    |                 |                       |                    |          |
| RT0816 | 1/16W         | ±25(P)                                | 100                            | 330  | 1.0k | -    |                                    | 100V            |                       | 5,000pcs           |          |
|        |               |                                       | 2.7k                           | 8.0k | 8.8k | -    |                                    |                 |                       |                    |          |
|        |               | ±100(R)                               | -                              | 3.3k | 10k  | --   |                                    | 100V            |                       | 5,000pcs           |          |
|        |               |                                       | -                              | 37k  | 40k  | -    |                                    |                 |                       |                    |          |
| RT1220 | 1/10W         | ±25(P)                                | 100                            | 330  | 1.0k | -    |                                    | 100V            | 5,000pcs              |                    |          |
|        |               |                                       | 8.2k                           | 15k  | 15k  | -    |                                    |                 |                       |                    |          |
|        |               | ±50(Q)                                | 33                             | -    | -    | -    |                                    |                 |                       | 100V               | 5,000pcs |
|        |               |                                       | 4.7k                           | -    | -    | -    |                                    |                 |                       |                    |          |
|        |               | ±100(R)                               | 3.3k                           | 10k  | 33k  | 100k |                                    |                 |                       | 100V               | 5,000pcs |
|        |               |                                       | 100k                           | 120k | 120k | 220k |                                    |                 |                       |                    |          |

## ◆ Dimensions



| Type   | Size (inch) | L         | W         | a         | b         | t         |
|--------|-------------|-----------|-----------|-----------|-----------|-----------|
| RT0603 | 0201        | 0.60±0.05 | 0.30±0.03 | 0.12±0.05 | 0.15±0.05 | 0.25±0.03 |
| RT0510 | 0402        | 1.00±0.07 | 0.50±0.07 | 0.20±0.10 | 0.25±0.10 | 0.35±0.05 |
| RT0816 | 0603        | 1.60±0.20 | 0.80±0.20 | 0.30±0.20 | 0.30±0.20 | 0.40±0.10 |
| RT1220 | 0805        | 2.00±0.20 | 1.25±0.20 | 0.40±0.20 | 0.40±0.20 | 0.40±0.10 |

(unit : mm)