

# RU TYPE

## 超精密級高精度抵抗器 Ultrahigh Precision High Accuracy Resistors



RU抵抗器はRHタイプを改良し、実装時の信頼性と長期安定性を高めた高精度抵抗器です。計測機器、分析機器など、各方面でご使用いただいています。

The RU type resistors have higher reliability when they are mounted on board, and excellent long term stability. These are used mainly in semiconductor equipments, X-ray apparatuses, and other many measuring instruments.

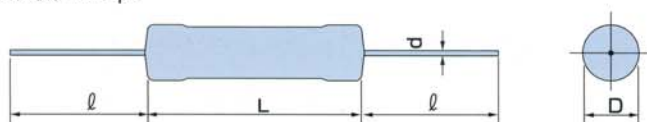
### ■特長/FEATURES

- 温度係数、抵抗値許容差が小さい。
- 小型軽量で信頼性が高く、長期安定性に優れている。
- パルス電圧に対して安定である。
- 実装時の熱負荷に安定である。
- Small temperature coefficient, small resistance tolerance.
- Small in size, light weight, high reliability and excellent long-term stability.
- Strong resistance for pulse voltages.
- Strong thermal shock resistance when they are mounted on board.

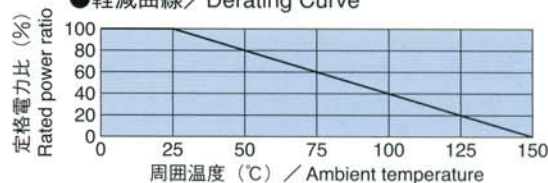
### ■特性/CHARACTERISTICS

| 項目 Item                                | 特性 Characteristics                    | 試験方法 Test method  |
|--|---------------------------------------|---|
| 使用温度範囲<br>Operating temperature range  | -55°C~+150°C                          |   |
| 短時間負荷<br>Short-time overload           | ±0.1%                                 | 定格電圧×2.5倍、5秒間<br>Rated voltage×2.5 applied for 5sec.                                  |
| はんだ耐熱性<br>Resistance to soldering heat | ±0.1%                                 | 260°C 10秒間または380°C 3秒間<br>260°C 10sec. or 380°C 3sec.                                 |
| ヒートサイクル<br>Heat cycle                  | ±0.1%                                 | -55°C⇔+150°C 5サイクル<br>-55°C⇔+150°C 5 cycle  |
| 経時変化<br>Long-term stability            | ±0.3%                                 | 常温常湿 10,000時間 無負荷放置<br>At normal temperature and humidity for 10,000hrs. without load |
| 耐湿性<br>Moisture resistance             | ±0.3%                                 | 40°C 90~95%RH 1,000時間 無負荷放置<br>40°C 90~95%RH 1,000hrs. exposure without load          |
| 負荷寿命<br>Load life                      | ±0.5%                                 | 25°C 定格電力×1/2 3,000時間<br>25°C Rated power×1/2 3,000hrs.                               |
| 温度係数<br>Temperature coefficient        | ※1 A B C D<br>±10 ±25 ±50 ±100 ppm/°C | 25°Cと75°Cで測定<br>Measured at 25°C and 75°C   |

#### ●形状/Shape



#### ●軽減曲線/Derating Curve



| 形名<br>Type | 特性<br>Characteristics |  | 抵抗値範囲<br>Range of resistance values |                 | 定格電力<br>Rated Power (W) | 最高使用電圧<br>Max. working voltage DC (kV) | 標準波<br>パルス電圧<br>Impulse voltage(kV)<br>1.2×50<br>μsec | 寸法<br>Dimensions (mm) |       |      |          | 抵抗値許容差<br>Resistance tolerance (%) |
|------------|-----------------------|--|-------------------------------------|-----------------|-------------------------|--|---|-----------------------|-------|------|----------|------------------------------------|
|            | 記号<br>Symbol          | 温度係数<br>Temperature coefficient (ppm/°C) | 最小<br>Min. (MΩ)                     | 最大<br>Max. (MΩ) |                         |  |   | L                     | D     | ℓ    | d        |                                    |
| RU1/4      | B                     | ±25                                      | 0.1                                 | 100             | 1/4                     | 0.75                                   | 1.5   | 9±1                   | 3±1   | 38±3 | 0.6±0.05 | ±0.1 (B)<br>±0.25 (C)              |
|            | C                     | ±50                                      | 0.1                                 | 100             |                         |  |   |                       |       |      |          |                                    |
|            | D                     | ±100                                     | 0.1                                 | 100             |                         |  |   |                       |       |      |          |                                    |
| RU1/2      | B                     | ±25                                      | 0.1                                 | 100             | 1/2                     | 1.5                                    | 3   | 13±1                  | 4.5±1 | 38±3 | 0.8±0.05 |                                    |
|            | C                     | ±50                                      | 0.1                                 | 100             |                         |  |   |                       |       |      |          |                                    |
|            | D                     | ±100                                     | 0.1                                 | 100             |                         |  |   |                       |       |      |          |                                    |
| RU1        | B                     | ±25                                      | 0.1                                 | 100             | 1                       | 2                                      | 4   | 14.5±1                | 4.5±1 | 38±3 | 0.8±0.05 |                                    |
|            | C                     | ±50                                      | 0.1                                 | 100             |                         |  |   |                       |       |      |          |                                    |
|            | D                     | ±100                                     | 0.1                                 | 100             |                         |  |   |                       |       |      |          |                                    |
| RU2        | B                     | ±25                                      | 0.1                                 | 100             | 2                       | 5                                      | 10  | 26.5±1                | 5.5±1 | 38±3 | 1±0.05   |                                    |
|            | C                     | ±50                                      | 0.1                                 | 100             |                         |  |   |                       |       |      |          |                                    |
|            | D                     | ±100                                     | 0.1                                 | 100             |                         |  |   |                       |       |      |          |                                    |
| RU3        | B                     | ±25                                      | 0.2                                 | 100             | 3                       | 10                                     | 20  | 42±2                  | 5.5±1 | 38±3 | 1±0.05   |                                    |
|            | C                     | ±50                                      | 0.2                                 | 100             |                         |  |   |                       |       |      |          |                                    |
|            | D                     | ±100                                     | 0.2                                 | 100             |                         |  |   |                       |       |      |          |                                    |

注 ※1 温度係数A特性のものについてはご相談ください。

NOTICE : ※1 Also consult your local dealer for the availability of resistors with a temperature coefficient of "A" characteristic.

〈使用上の注意〉 ご使用にあたり、定格電力の50%以下でお使いください。

〈CAUTION〉 Rated power recommend derate less than 50% for long term use.