● Standards nominal resistance values

<table>
<thead>
<tr>
<th>Series</th>
<th>10</th>
<th>15</th>
<th>22</th>
<th>33</th>
<th>47</th>
<th>68</th>
</tr>
</thead>
<tbody>
<tr>
<td>E3</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>E6</td>
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<td>E12</td>
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<tr>
<td>E24</td>
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<td></td>
</tr>
<tr>
<td>E96</td>
<td></td>
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</tr>
</tbody>
</table>

Common ratio

<table>
<thead>
<tr>
<th>Series</th>
<th>Common ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>E6</td>
<td>$\sqrt[5]{10} \times 1.46$</td>
</tr>
<tr>
<td>E12</td>
<td>$\sqrt[6]{10} \times 1.21$</td>
</tr>
<tr>
<td>E24</td>
<td>$\sqrt[8]{10} \times 1.10$</td>
</tr>
<tr>
<td>E96</td>
<td>$\sqrt[9]{10} \times 1.02$</td>
</tr>
</tbody>
</table>

Notes

- The values are rounded up or down based on the number of effective digits.

● Nominal Resistance

Resistors of a series fall into one of nominal resistance ranges shown in the table above. Nominal resistance is determined by the common ratio shown right.

● Resistance coding

Nominal resistance is expressed in 3 digits when the resistance tolerance is ±5% and in 4 digits when ±1%. The leading 2 or 3 digits indicate significant figure while the last digit indicates the number of zeros. The letter R denotes the decimal point if necessary.

EX1 : 22Ω → 22 × 10^0Ω → 220 (the last digit indicates the number "0" of a multiplier)

EX2 : 47kΩ → 47 × 10^3Ω → 473 (the last digit indicates the number "3" of a multiplier)

EX3 : 1.2MΩ → 12 × 10^5Ω → 125 (the last digit indicates the number "5" of a multiplier)

EX4 : 2.7Ω → 2R7 (the decimal point indicates the letter R / the letter R applies to the low resistance less than 10Ω)

EX5 : 1130Ω → 113 × 10^1Ω → 1131 (the last digit indicates the number "1" of a multiplier / Resistance Tolerance 1%(F) products)

EX6 : 0.1Ω → R10

● Supplement of rated power

The load power should be reduced based on the derating curve once the ambient temperature exceeds the rated values.

● For basic guidelines on using resistors, see the technical reports issued by Japan Electronics and Information Technology Industries Association, JEITA RCR-2121A.

* Guideline of notation for fixed resistors for use in electronic equipment (Safety Application Guide for fixed resistors for use in electronic equipment)*

● Supplementary to notes

*1: When resistor is to be exposed to a transient load (excessive large load, such as pulse), mount the resistor on your product and check the condition and evaluate the result. Constant application of a voltage above the rated voltage will degrade the performance and reliability of the resistor. Do not apply a voltage exceeding the rated voltage across any RHOM resistors.

*2: Rated Voltage(V) = $\sqrt{\text{Rated Power(W)} \times \text{Nominal Resistance(Ω)}}$ or the limiting element voltage, whichever smaller, is the rated voltage.
Notes

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