

**Wide terminal type thick film chip resistors (RPW series)**

RPW18 (0612) RPW50 (1020) RPW1S (1225)

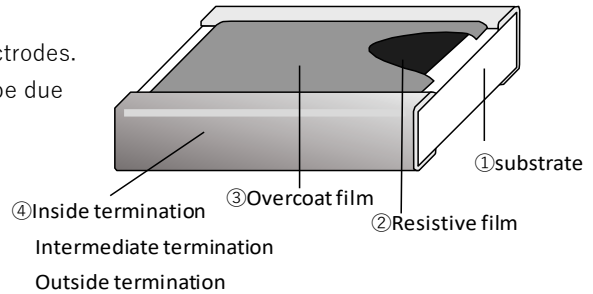
\*( ): Inch size

**EOL (End of life) : RPW50(1020)  
RPW1S(1225)**

■ Features

- The use of a wide terminal type significantly improves the reliability of solder joints compared to short-side electrodes.
- Improved heat dissipation compared to short terminal type due to the long side electrodes.
- RoHS qualified
- ELV qualified
- AEC-Q200 qualified
- AEC-Q200 qualified

■ Structure



■ Part No. Explanation (Example)

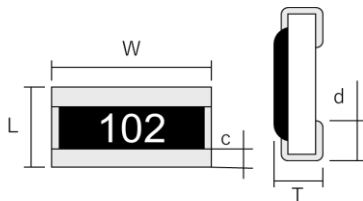
|                          |   |   |   |   |                                    |   |   |   |                      |
|--------------------------|---|---|---|---|------------------------------------|---|---|---|----------------------|
| R                        | P | W | 1   | 8 | T                                  | 1   | 0 | 3 | J                    |
| Product type             |   |   | Rated power and Size                      |   | Packaging form                     | Nominal resistance value(*)                           |   |   | Resistance tolerance |
| RPW : wide terminal type |   |   | 18:0.75W,0612<br>50:1W,1020<br>1S:2W,1225 |   | T : 4mm pitch taping<br>φ 180 reel | The resistance value is indicated by 3-digit numbers. |   |   | J: ±5%<br>F: ±1%     |

\*The first two numbers are significant numbers,

and the third number is the one of zeros "0" following to the first two numbers (multiple of 10).

\*If there is a decimal point in resistance value, it is indicated by "R" and all numbers are significant numbers.

■ Dimensions



|       | L           | W           | T                                      | c           | d           |
|-------|-------------|-------------|--|-------------|-------------|
| RPW18 | 1.60 ± 0.15 | 3.20 ± 0.15 | 0.55 <sup>+0.10</sup> <sub>-0.05</sub> | 0.25 ± 0.15 | 0.35 ± 0.15 |
| RPW50 | 2.50 ± 0.20 | 5.00 ± 0.20 | 0.55 ± 0.20                            | 0.25 ± 0.20 | 0.90 ± 0.20 |
| RPW1S | 3.20 ± 0.20 | 6.30 ± 0.20 | 0.60 ± 0.20                            | 0.30 ± 0.20 | 1.10 ± 0.20 |

\* External dimensions are for reference only.

Overcoat film color : Black

The resistance value is indicated by 3-digit numbers.

**EOL (End of life) : RPW50(1020)  
RPW1S(1225)**

(Unit: mm)

## ■ Ratings

|       | Rated power | Limiting element voltage(*1) | Maximum overload voltage(*2) | Range of rated resistance | Tolerance on rated resistance | Category temperature range | Temperature Coefficient of Resistance(T.C.R) |                           |
|-------|-------------|------------------------------|------------------------------|---------------------------|-------------------------------|----------------------------|--|---------------------------|
|       |             |                              |                              |                           |                               |                            |  |                           |
| RPW18 | 0.75W       | 200V                         | 400V                         | 0.1Ω~1MΩ                  | J(±5%)<br>F(±1%)              | -55°C~+155°C               | 0.1Ω~1MΩ                                     | ±200×10 <sup>-6</sup> /°C |
| RPW50 | 1W          | 200V                         | 400V                         | 0.1Ω~100kΩ                | J(±5%)<br>F(±1%)              | -55°C~+155°C               | 0.1Ω~100kΩ                                   | ±200×10 <sup>-6</sup> /°C |
| RPW1S | 2W          | —                            | —                            | 0.075Ω~11kΩ               | J(±5%)<br>F(±1%)              | -55°C~+155°C               | 0.075Ω~11kΩ                                  | ±200×10 <sup>-6</sup> /°C |

(\*1) Rated voltage =  $\sqrt{\text{Rated power} \times \text{Resistance value}}$

In the case of rated voltage over above limiting element voltage, limiting element voltage will be the maximum.

(\*2) The applied voltage in short time overload test = 2.5×rated voltage

In the case of the applied voltage in short time overload test over above maximum overload voltage, maximum overload voltage will be the maximum.

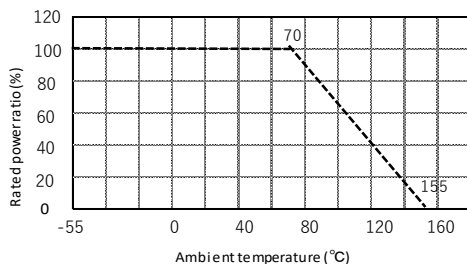
\* There are the supplementary information about rating on reference page.

\* Temperature Coefficient of Resistance (T.C.R) is based on JIS C5201-1 6.2 between two points: 25°C and 125°C.

## ■ Specifications and test methods

| Item                              | Specifications             | Test method   |
|-----------------------------------|----------------------------|---|
| Overload                          | ±(2%+0.05Ω)                | JIS C5201-1 8.1<br>2.5×Rated voltage, for 5 seconds |
| Bend strength of the face plating | ±(1%+0.05Ω)                | JIS C5201-1 9.8<br>Bending distance : 3mm           |
| Resistance to soldering heat      | ±(1%+0.05Ω)                | JIS C5201-1 11.2<br>260±5°C.10(sec.)                |
| Solderability                     | Covered with more than 95% | JIS C5201-1 11.1<br>245±3°C.(sec.)                  |
| Rapid change of temperature       | ±(1%+0.05Ω)                | JIS C5201-1 10.1<br>-55°C⇔+125°C.1000(times)        |
| Loadlife in humidity              | ±(3%+0.05Ω)                | 60±2°C.90~95% R.H 1000h                             |
| Endurance at 70°C                 | ±(3%+0.05Ω)                | JIS C5201-1 7.1<br>70±2°C.1000h                     |

## ■ Derating curve



\* Rated power of the resistor is the maximum power which can be loaded continuously at the ambient temperature of 70 °C. For the ambient temperature above 70°C, please use the item according to the load derating curve (dotted line) Please note that the component surface temperature does not exceed operating temperature range.