Wide terminal type thick film chip resistors（RPW series）

RPW18（0612） RPW50（1020） RPW1S（1225）

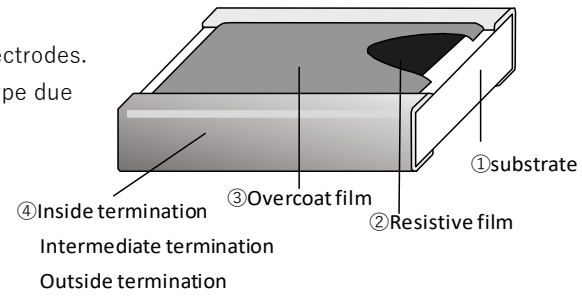
*( ): Inch size

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

■Structure



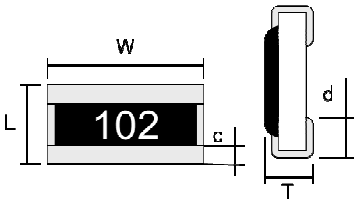
■Part No. Explanation (Example)

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 50:1W,1020 1S:2W,1225	T : 4mm pitch taping ϕ 180 reel	The resistance value is indicated by 3-digit numbers.	J: ± 5% 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 $^{+0.10}_{-0.05}$	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%) F(±1%)	-55°C~+155°C		0.1Ω～1MΩ	±200×10⁻⁶/°C
RPW50	1W	200V	400V	0.1Ω～100kΩ	J(±5%) F(±1%)	-55°C~+155°C		0.1Ω～100kΩ	±200×10⁻⁶/°C
RPW1S	2W	—	—	0.075Ω～11kΩ	J(±5%) F(±1%)	-55°C~+155°C		0.075Ω～11kΩ	±200×10⁻⁶/°C

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

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.

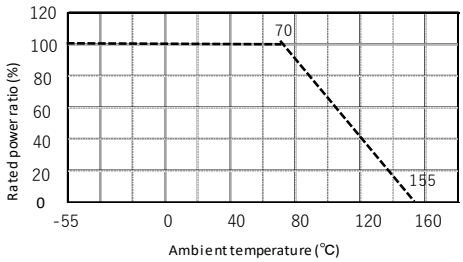
＊There are the supplementary information about rating on reference page.

＊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 2.5×Rated voltage, for 5 seconds
Bend strength of the face plating	±(1%+0.05Ω)	JIS C5201-1 9.8 Bending distance : 3mm
Resistance to soldering heat	±(1%+0.05Ω)	JIS C5201-1 11.2 260±5°C.10(sec.)
Solderability	Covered with more than 95%	JIS C5201-1 11.1 245±3°C.(sec.)
Rapid change of temperature	±(1%+0.05Ω)	JIS C5201-1 10.1 -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 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.