

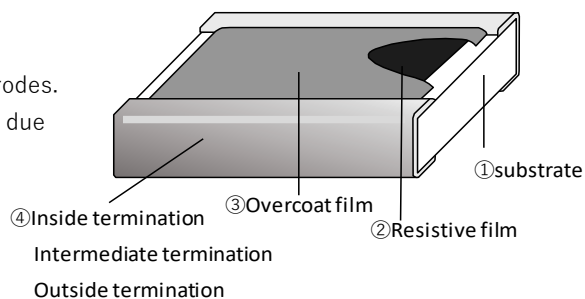
## Anti-surge · wide-terminal type thick film chip resistors RPY series

RPY18 (0612) \*( ): Inch size

### ■ 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.
- Improved anti-surge characteristics compared to the conventional long-side electrode product (RPW18)
- RoHS qualified
- ELV qualified
- AEC-Q200 qualified

### ■ Structure



\*This is only a schematic drawing of the structure.

### ■ Part No. Explanation (Example)

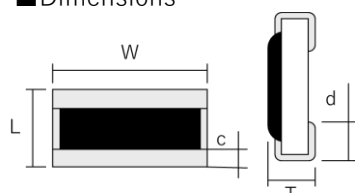
R	P	Y	1	8		T	1	R	0	F
Product type			Rated power and Size		T.C.R	Packaging form	Nominal resistance value(*)			Resistance tolerance
RPY : Anti-surge wide terminal type			18:0.75W,0612		C: ±50 K: ±100 (10 <sup>-6</sup> /°C)	T : 4mm pitch taping φ 180 reel	The resistance value is indicated by 3-digit numbers. E96 sequence products are indicated by a 4-digit.			J: ±5% F: ±1% D:0.5%

\*The first two numbers are significant numbers, and the third one is the number of zeros "0" following to the first two numbers (multiple of 10).

\*In the case of the E96 sequence, the first three values mean the significant figures and the fourth one represents the number of 0 following to them (multiplier 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
RPY18	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

(Unit: mm)

\* External dimensions are for reference only.

Overcoat film color : Black

## ■ 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)		
RPY18	0.75W	200V	400V	J : 1.0Ω~1MΩ	J(±5%)	-55°C~+155°C		1Ω~1MΩ	±200×10 <sup>-6</sup> /°C
				F : 1.0Ω~1MΩ	F(±1%)	-55°C~+155°C		1Ω~9.1Ω	
							K	10Ω~1MΩ	±100×10 <sup>-6</sup> /°C
				D : 10Ω~1MΩ	D(±0.5%)	-55°C~+155°C	K	10Ω~91Ω	
			C	100Ω~1MΩ	±50×10 <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.

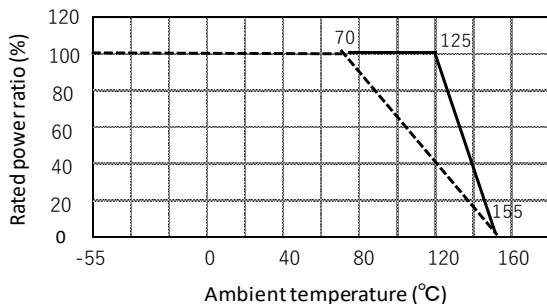
\* There are the supplementary information about rating on reference page.

\* 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	±(0.5%+0.05Ω)	JIS C5201-1 8.1 2.5×Rated voltage, for 5 seconds
Bend strength of the face plating	±(0.5%+0.05Ω)	JIS C5201-1 9.8 Bending distance : 3mm
Resistance to soldering heat	±(0.5%+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	±(1%+0.05Ω)	60±2°C.90~95% R.H 1000h
Endurance at 70°C	±(1%+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 according to the load derating curve (dotted line). Please note that the component surface temperature does not exceed operating temperature range.

\* If the component temperature is below 155°C, the power rating can be used according to the load derating curve in the solid line.