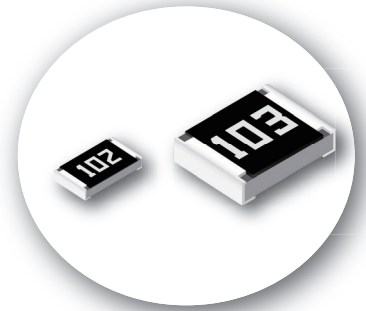


## Anti-Surge Chip Resistors

Contributing to industry, infrastructure, and in-vehicle equipment by miniaturizing and increasing power consumption



### Product summary

- Proprietary materials and centralized load control achieve high power and high withstand voltage (pulse resistance)

### Features

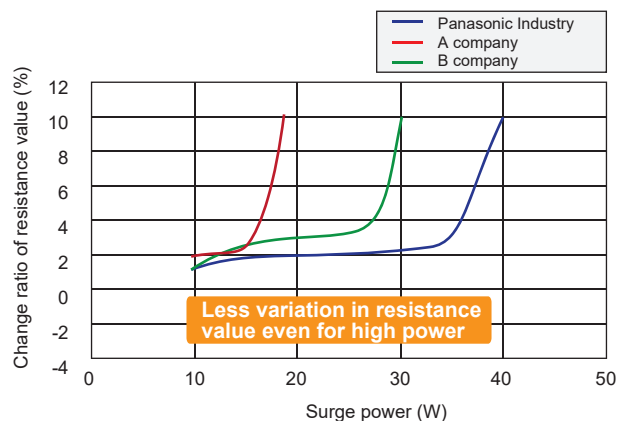
- Small, high-power (size reduction is possible at least the same as the rated power)
- Excellent anti-surge and anti-pulse performance

### Structure

Existing Designs	0603 size High-Power Resistors
<ul style="list-style-type: none"> <li>Resistive element</li> <li>Pattern : Rectangle (small area)</li> <li>Material : Standard type</li> <li>Trimming</li> <li>L-shaped (load concentrated at tip and corner)</li> </ul>	<ul style="list-style-type: none"> <li>Resistive element</li> <li>Pattern : Rectangle (large area)</li> <li>Material : Power resistant type</li> <li>Trimming</li> <li>2 opposing arcs (Load concentration suppression)</li> </ul>
<p>Max power : 1390 (W/mm<sup>2</sup>)</p>	<p>Max power : 504(W/mm<sup>2</sup>) ※ 64% down</p>

### High Anti-Surge performance

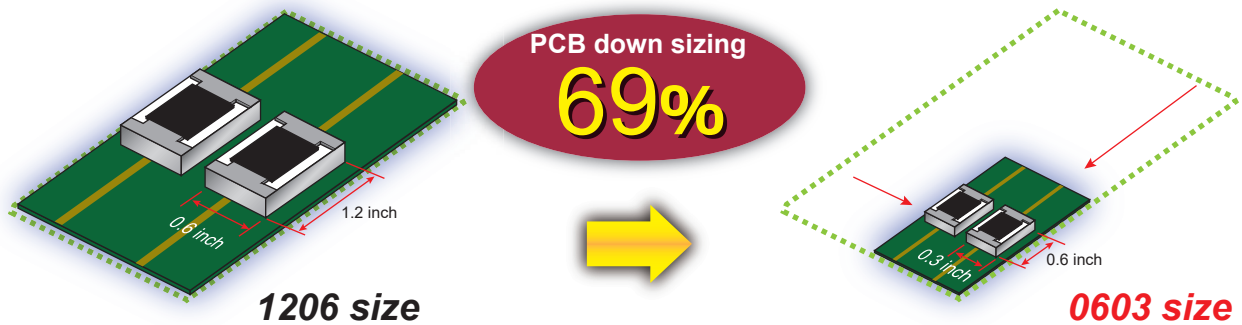
- Failure reduction
- Design margin securing



※ 1ms, Square wave power × 1000 times application

## Contribution points

[Contributes to "PCB miniaturization" by replacing standard products with small & high-power products of the same or higher power rating.]



Power (W) \ Size (inch)	0402	0603	0805	1206	1210
0.5			ERJP06 	<b>65% down</b> 	
0.25		ERJPA3 	<b>69% down</b> 		
0.2	ERJPA2 				
0.125		<b>78% down</b> 			

※ means down sizing rate (%) of PCB.

Panasonic Industry

Standard

## Specifications

Part No. (inch)	Power rating <sup>*1</sup> (W)	Rated ambient temp. <sup>*2</sup> (°C)	Rated terminal part temp. <sup>*2</sup> (°C)	Limiting element voltage <sup>*3</sup> (V)	Maximum overload voltage <sup>*4</sup> (V)	Resistance tolerance (%)	Resistance range (Ω)	T.C.R. (×10 <sup>-6</sup> /K)	Category temp. range (°C)
ERJPA2 (0402)	0.20	70	—	50	100	±0.5	10 to 1M (E24, E96)	±0.5, ±1 : ±100 ±5 : ±200 R<10Ω : -100~+600	
						±1	1 to 1M (E24)		
	±0.5	10 to 1M (E24, E96)							
	±1	1 to 1M (E24)							
ERJPA3 (0603)	0.25	105	—	150	200	±0.5	10 to 1M (E24, E96)	±0.5, ±1 : ±100 ±5 : ±200	-55 to +155
						±1	1 to 1.5M (E24)		
	±0.5	10 to 1M (E24, E96)							
	±1	1 to 1.5M (E24)							
ERJP06 (0805)	0.50	70	115	400	600	±0.5	10 to 1M (E24, E96)	R<33Ω : ±300 33Ω≤R : ±100	
						±1	1 to 3.3M (E24)		
ERJP08 (1206)	0.66	70	125	500	1000	±0.5	10 to 1M (E24, E96)	±100	
						±1	1 to 10M (E24)		
						±5	1 to 10M (E24)	R<10Ω : -100 to +600 10Ω≤R : ±200	

\*1: Use it on the condition that the case temperature is below the upper category temperature.

\*2: If there is a doubt whether the rated ambient temperature or the rated terminal part temperature is used, give priority to the rated terminal part temperature.

\*3: Rated Continuous Working Voltage (RCWV) shall be determined from RCWV=√Power Rating × Resistance Value, or Limiting Element Voltage listed above, whichever less.

\*4: Overload Test Voltage (OTV) shall be determined from OTV=Specified Magnification (refer to performance) × RCWV or Maximum Overload Voltage listed above, whichever less.

Data sheet →

