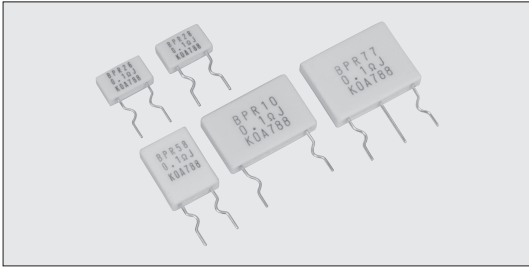
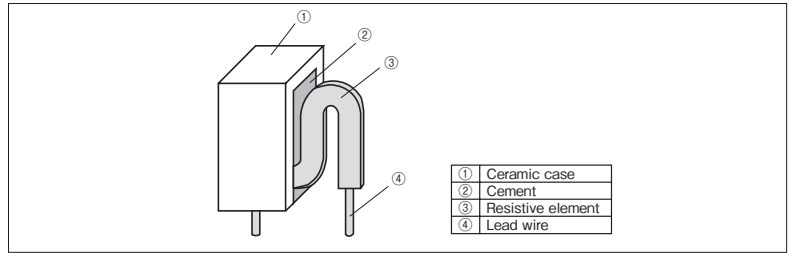


## BPR Rectangular Type Metal Plate Resistors



Case : Ceramic  
Marking : Alphanumeric

### Construction



### Features

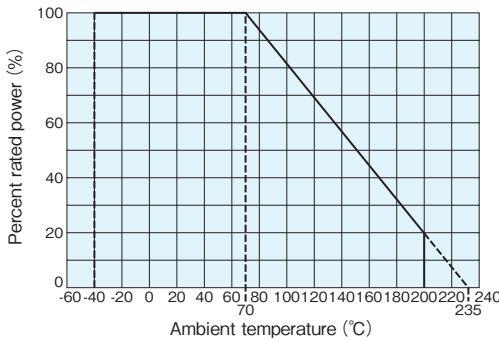
- Power type current detecting resistors.
- Flame retardant resistors in Ceramic Case.
- Automatic insertion for a 5mm pitch between terminals is applicable. (BPR26, BPR58 Radial Taping)
- Low inductance.
- Space saving.
- Products meet EU-RoHS requirements.

### Type Designation

Example

| BPR          | 5  | 8   | C                         | F  | R10  | J                             |
|--------------|--|---|---------------------------|--|--|-------------------------------|
| Product Code | Power Rating   | Lead Wire Diameter  | Terminal Surface Material | Taping & Forming   | Nominal Resistance                                       | Resistance Tolerance          |
|              | 2 : 2W<br>3 : 3W<br>5 : 5W<br>10 : 10W<br>55 : 5W+5W<br>77 : 7W+7W | 6 : $\phi$ 0.6mm<br>8 : $\phi$ 0.8mm<br><br>8 : $\phi$ 0.8mm<br>Blank | C : SnCu                  | Nil: Straight lead (Pitch 9.0mm)<br>F: Forming (Pitch 9.0mm)<br>FT: Radial taping (BPR26FT&BPR58FT only) (Pitch 5.0mm) | 3 digits<br>Ex. 0.1 $\Omega$ : R10<br>47m $\Omega$ : 47L | J : $\pm$ 5%<br>K : $\pm$ 10% |

### Derating Curve



| Resistance Value ( $\Omega$ ) | 3 digits |
|-------------------------------|----------|
| 10m~82m                       | 10L~82L  |
| 0.1~0.82                      | R10~R82  |
| 1                             | 1R0      |

Contact us when you have control request for environmental hazardous material other than the substance specified by EU-RoHS.

For further information on radial taping, please refer to APPENDIX C on the back page.

For resistors operated at an ambient temperature of 70°C or higher, the power shall be derated in accordance with the above derating curve.

### Dimensions and Ratings

| Type   | Power Rating | Resistance Range ( $\Omega$ ) <sup>※1</sup> |                     | T.C.R. ( $\times 10^{-6}/K$ ) | Dimensions (mm) |                |           |             |           | Weight (g/1,000pcs) |
|--------|--------------|---|---------------------|-------------------------------|-----------------|----------------|-----------|-------------|-----------|---------------------|
|        |              | J : $\pm$ 5% (E12)                          | K : $\pm$ 10% (E12) |                               | A               | B              | C $\pm$ 1 | d $\pm$ 0.1 | P $\pm$ 1 |                     |
| BPR26  | 2W           | 0.01<br>0.1~0.68                            | 0.01~0.68           | $\pm$ 350 <sup>※2</sup>       | 8.5 $\pm$ 1.0   | 13.0 $\pm$ 1.0 | 4.0       | 0.6         | 9.0       | 1,190               |
| BPR28  | 2W           |   |                     |                               | 13.0 $\pm$ 1.0  | 14.0 $\pm$ 1.0 | 5.0       |             |           | 0.8                 |
| BPR38  | 3W           |   |                     |                               | 18.0 $\pm$ 1.0  |                |           | 2,240       |           |                     |
| BPR58  | 5W           | 0.01, 0.1~1.0                               | 0.01~1.0            |                               | 17.0 $\pm$ 1.5  | 26.0 $\pm$ 1.5 | 5.0       | 0.8         | 20.0      | 3,470               |
| BPR108 | 10W          | —   | 0.05, 0.1~1.0       |                               | 20.0 $\pm$ 1.8  |                |           |             | 5,560     |                     |
| BPR55  | 5W+5W        | 0.05, 0.1                                   | 0.03~0.47           |                               | 10.0            |                |           |             | 5,830     |                     |
| BPR77  | 7W+7W        | 0.22~0.47                                   |                     |                               |                 | 7,060          |           |             |           |                     |

Rated Ambient Temperature : +70°C

Operating Temperature Range : -40°C~+200°C

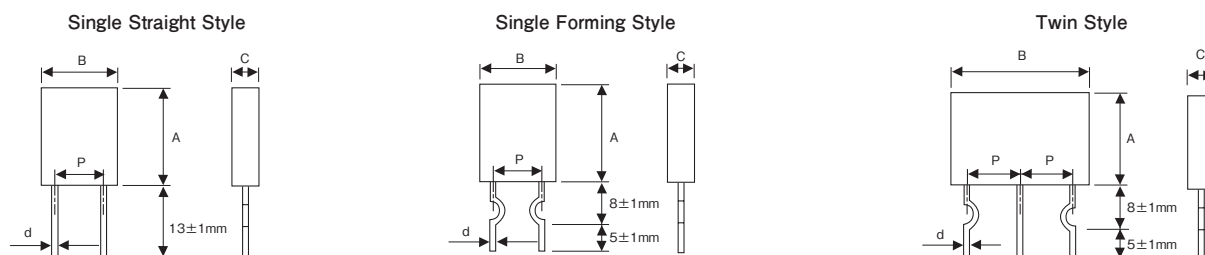
Rated voltage =  $\sqrt{\text{Power Rating} \times \text{Resistance value}}$

※1 See table standard resistance

※2 Application range : The straight style of 0.018 $\Omega$  over

## ■ Dimensions (mm)

Please inquire of us if the dimensions for the case and lead position are required.



## ■ Standard Resistance

| Resistance (Ω)     | 26, 28  |          | 38      |          | 58      |          | 108     |          | 55      |          | 77      |          |
|--------------------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|
|                    | J : ±5% | K : ±10% | J : ±5% | K : ±10% | J : ±5% | K : ±10% | J : ±5% | K : ±10% | J : ±5% | K : ±10% | J : ±5% | K : ±10% |
| 0.01               | ○       | ○        | ○       | ○        | ○       | ○        | —       | —        | —       | —        | —       | —        |
| 0.012              |         | ○        |         | ○        |         | ○        | —       | —        | —       | —        | —       | —        |
| 0.015              |         | ○        |         | ○        |         | ○        | —       | —        | —       | —        | —       | —        |
| 0.018              |         | ○        |         | ○        |         | ○        | —       | —        | —       | —        | —       | —        |
| 0.02 <sup>※3</sup> |         | ○        |         | ○        |         | ○        | —       | —        | —       | —        | —       | —        |
| 0.022              |         | ○        |         | ○        |         | ○        | —       | —        | —       | —        | —       | —        |
| 0.027              |         | ○        |         | ○        |         | ○        | —       | —        | —       | —        | —       | —        |
| 0.03 <sup>※3</sup> |         | ○        |         | ○        |         | ○        | —       | —        |         | ○        |         |          |
| 0.033              |         | ○        |         | ○        |         | ○        | —       | —        |         |          |         |          |
| 0.039              |         | ○        |         | ○        |         | ○        | —       | —        |         |          |         |          |
| 0.04 <sup>※3</sup> |         | ○        |         | ○        |         | ○        |         |          |         |          |         |          |
| 0.047              |         | ○        |         | ○        |         | ○        |         |          |         |          |         |          |
| 0.05 <sup>※3</sup> |         | ○        |         | ○        |         | ○        |         | ○        | ○       | ○        |         | ○        |
| 0.068              |         | ○        |         | ○        |         | ○        |         |          |         |          |         |          |
| 0.082              |         | ○        |         | ○        |         | ○        |         |          |         |          |         |          |
| 0.1                | ○       | ○        | ○       | ○        | ○       | ○        |         | ○        | ○       | ○        |         | ○        |
| 0.12               | ○       | ○        | ○       | ○        | ○       | ○        |         |          |         | ○        |         |          |
| 0.15               | ○       | ○        | ○       | ○        | ○       | ○        |         | ○        |         | ○        |         |          |
| 0.18               | ○       | ○        | ○       | ○        | ○       | ○        |         | ○        |         | ○        |         |          |
| 0.22               | ○       | ○        | ○       | ○        | ○       | ○        |         | ○        | ○       | ○        | ○       | ○        |
| 0.27               | ○       | ○        | ○       | ○        | ○       | ○        |         | ○        | ○       | ○        |         |          |
| 0.33               | ○       | ○        | ○       | ○        | ○       | ○        |         |          | ○       | ○        | ○       | ○        |
| 0.39               | ○       | ○        | ○       | ○        | ○       | ○        |         |          | ○       | ○        |         |          |
| 0.47               | ○       | ○        | ○       | ○        | ○       | ○        |         |          | ○       | ○        |         |          |
| 0.56               | ○       | ○        | ○       | ○        | ○       | ○        |         |          |         |          |         |          |
| 0.68               | ○       | ○        | ○       | ○        | ○       | ○        |         |          | —       | —        | —       | —        |
| 0.82               |         |          |         |          |         | ○        |         |          | —       | —        | —       | —        |
| 1                  |         |          |         |          |         | ○        |         | ○        | —       | —        | —       | —        |

※3 : Out of E12 Series

○ : Available

Blank : Please consult.

— : Not available

## ■ Performance

| Test Items                   | Performance Requirements ΔR%                            |         | Test Methods  |
|------------------------------|---|---------|---|
|                              | Limit   | Typical |   |
| Resistance                   | Within specified tolerance                              | —       | 25°C (Measurement position : 10mm under from the case)  |
| T.C.R.                       | Within specified T.C.R.                                 | —       | +25°C/+125°C (Application range : The straight style of 0.018Ω over)  |
| Overload (Short time)        | 2   | 1       | Rated voltage×2.5 for 5s (Application range : 0.05Ω over)   |
| Resistance to soldering heat | 2   | 1       | 260°C±5°C, 10s±1s   |
| Moisture resistance          | 5   | 3       | 40°C±2°C, 90%~95%RH, 1000h<br>1.5h ON/0.5h OFF cycle  |
| Endurance at 70°C            | 5   | 3       | 70°C±2°C, 1000h<br>1.5h ON/0.5h OFF cycle   |
| High temperature exposure    | 3   | 2       | +125°C, 100h  |
| Resistance to solvent        | No evidence of damage to protective coating and marking | —       | After immersing the sample in I.P.A for 60s ±10s, the resistor surface should be rubbed with absorbent cotton 10 times. |

## ■ Precautions for Use

- In the resistance values of 50mΩ or under, the resistance value after soldering may change depending on the size of pad pattern or solder amount. Make sure the effect of decline/increase of resistance value before designing.
- Recommendation condition of a solderability.  
Peak temperature : 260°C±5°C    Peak time : 5s~10s