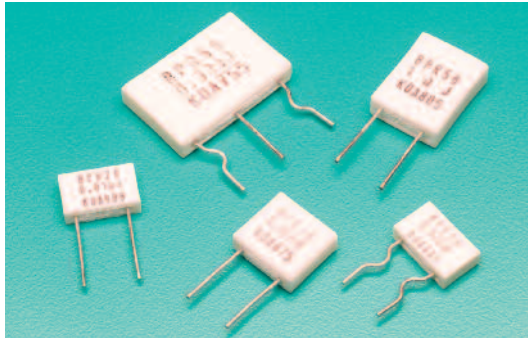




**THE DATASHEET OF
BPR58CR56K**

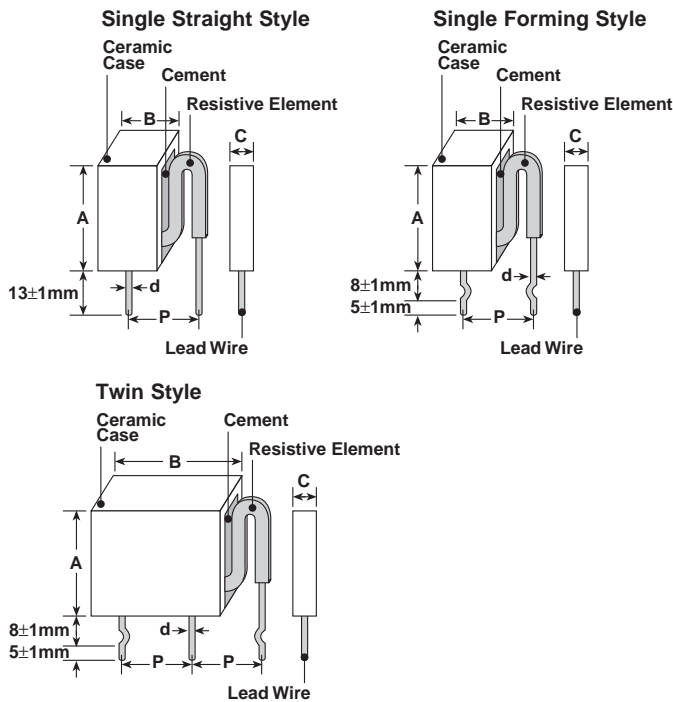




features

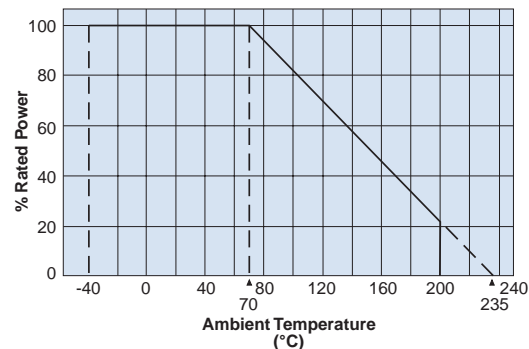
- Power type current detecting resistors
- Flame retardant resistors in ceramic case
- Automatic insertion for a 5mm pitch between terminals is applicable (26 type, 58 type)
- Low inductance
- Space saving
- Products with lead-free terminations meet EU RoHS requirements

dimensions and construction



| Size Code | Dimensions inches (mm) | | | | |
|-----------|------------------------|------------------------|-----------------------|------------------------|------------------------|
| | A | B | C | d | P |
| BPR26 | .335±.04 (8.5±1.0) | .512±.04 (13.0±1.0) | .157±.04 (4.0±1.0) | .024±.004 (0.6±0.1) | .354±.04 (9.0±1.0) |
| BPR28 | .335±.04 (8.5±1.0) | .512±.04 (13.0±1.0) | .157±.04 (4.0±1.0) | .031±.004 (0.8±0.1) | .354±.04 (9.0±1.0) |
| BPR38 | .512±.04 (13.0±1.0) | .551±.04 (14.0±1.0) | .197±.04 (5.0±1.0) | .031±.004 (0.8±0.1) | .354±.04 (9.0±1.0) |
| BPR58 | .709±.04 (18.0±1.0) | .551±.04 (14.0±1.0) | | .031±.004 (0.8±0.1) | .354±.04 (9.0±1.0) |
| BPR108 | .669±.06 (17.0±1.5) | 1.02±.06 (26.0±1.5) | .197±.04 (5.0±1.0) | .031±.004 (0.8±0.1) | .787±.04 (20.0±1.0) |
| BPR55 | .669±.06 (17.0±1.5) | 1.02±.06 (26.0±1.5) | | .031±.004 (0.8±0.1) | .394±.04 (10.0±1.0) |
| BPR77 | .787±.07 (20.0±1.8) | 1.02±.06 (26.0±1.5) | | .031±.004 (0.8±0.1) | .394±.04 (10.0±1.0) |

Derating Curve



ordering information

| | | | | | | |
|------------|-------------------------|------------------------|----------------------|--|---|-------------------|
| BPR | 5 | 8 | C | F | R10 | J |
| Type | Power Rating | Lead Wire Diameter | Termination Material | Packaging | Nominal Resistance | Tolerance |
| | 2: 2W 3: 3W 5: 5W | 6: ø0.6mm 8: ø0.8mm | C: SnCu | Blank: Straight lead (9.0mm pitch) F: Forming (9.0mm pitch) FT: Radial taping (BPR26FT, BPR58FT only, 5.0mm pitch) | 2 significant figures +1 multiplier. "R" indicates decimal on value <10Ω. All values less than 0.1Ω are expressed in mΩ with "L" as decimal. Ex: 20mΩ - 20L | J: ±5% K: ±10% |
| | 10: 10W | 8: ø0.8mm | | | | |
| | 55: 5W+5W 77: 7W+7W | Blank | | | | |

For further information on packaging, please refer to Appendix C.

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

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applications and ratings

| Part Designation | Power Rating | T.C.R. (ppm/°C) Max. | Resistance Range | | Rated Ambient Temperature | Operating Temperature Range |
|------------------|--------------|----------------------|------------------------------|--------------------|---------------------------|-----------------------------|
| | | | J: ±5% (E12) | K: ±10% (E12) | | |
| BPR26 | 2W | ±350* | 0.01Ω 0.1Ω - 0.68Ω | 0.01Ω - 0.68Ω | +70°C | -40°C to +200°C |
| BPR28 | 2W | | | | | |
| BPR38 | 3W | | | | | |
| BPR58 | 5W | | 0.01Ω, 0.1Ω - 1.0Ω | 0.01Ω - 1.0Ω | | |
| BPR108 | 10W | | — | 0.05Ω, 0.1Ω - 1.0Ω | | |
| BPR55 | 5W+5W | | 0.05Ω, 0.1Ω 0.22Ω - 0.47Ω | 0.03Ω - 0.47Ω | | |
| BPR77 | 7W+7W | | | | | |

* Application range: The straight style of 0.018Ω or over

standard resistance

| Resistance | 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* | | ○ | | ○ | | ○ | — | — | | | | |
| 0.022 | | ○ | | ○ | | ○ | — | — | | | | |
| 0.027 | | ○ | | ○ | | ○ | — | — | | | | |
| 0.03* | | ○ | | ○ | | ○ | — | — | | ○ | | |
| 0.033 | | ○ | | ○ | | ○ | — | — | | | | |
| 0.039 | | ○ | | ○ | | ○ | — | — | | | | |
| 0.04* | | ○ | | ○ | | ○ | — | — | | | | |
| 0.047 | | ○ | | ○ | | ○ | — | — | | | | |
| 0.05* | | ○ | | ○ | | ○ | — | — | | | | |
| 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 | | | | | | | ○ | ○ | — | — | — | — |
| 1.00 | | | | | | | ○ | ○ | — | — | — | — |

○ : Available

Blank : Please consult

— : Not available

* Non standard E-12 Decade Value

environmental applications

Performance Characteristics

| Parameter | Requirement Δ R% | | Test Method |
|---------------------------|---|---------|---|
| | Limit | Typical | |
| Resistance | Within regulated 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) | ±2.0% | ±1.0% | Rated power x 2.5 for 5 seconds (Application range: 0.05Ω & over) |
| Resistance to Solder Heat | ±2.0% | ±1.0% | 260°C ± 5°C, 10 seconds ± 1 second |
| Moisture Resistance | ±5.0% | ±3.0% | 40°C ± 2°C, 90 - 95% RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle |
| Endurance at 70°C | ±5.0% | ±3.0% | 70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle |
| High Temperature Exposure | ±3.0% | ±2.0% | +125°C, 100 hours |
| Resistance to Solvent | No evidence of damage to protective coating and marking | — | After immersing the sample in I.P.A for 60 seconds ± 10 seconds, the resistor surface should be rubbed with absorbent cotton 10 times |

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

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