

# Cement Fixed Resistors

## Performance Specification

|                                 |                                                                              |
|---------------------------------|------------------------------------------------------------------------------|
| Temperature Coefficient         | <20Ω: ±400PPM/°C; ≥20Ω: ±350PPM/°C                                           |
| Short Time Overload             | ±(5.0% + 0.05Ω)Max, with no evidence of mechanical damage.                   |
| Dielectric Withstanding Voltage | No evidence of flashover, mechanical damage, arcing or insulation breakdown. |
| Terminal Strength               | No evidence of mechanical damage.                                            |
| Resistance to Soldering Heat    | ±(1.0% + 0.05Ω)Max, with no evidence of mechanical damage.                   |
| Solderability                   | Min. 95% coverage                                                            |
| Temperature Cycling             | ±(2.0% + 0.05Ω)Max, with no evidence of mechanical damage.                   |
| Humidity (Steady State)         | ±(5.0% + 0.05Ω)Max, with no evidence of mechanical damage.                   |
| Load Life in Humidity           | Wire-wound ±(5.0% + 0.05Ω)Max                                                |
|                                 | Power film <100KΩ: ±(5.0% + 0.05Ω)Max                                        |
|                                 | ≥100KΩ: ±(10.0% + 0.05Ω)Max                                                  |
| Load Life                       | Wire-wound ±(5.0% + 0.05Ω)Max                                                |
|                                 | Power film <100KΩ: ±(5.0% + 0.05Ω)Max                                        |
|                                 | ≥100KΩ: ±(10.0% + 0.05Ω)Max                                                  |

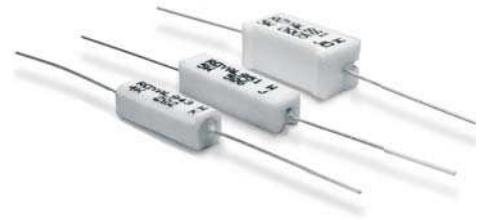
## Ordering Procedure: Ex.: PRW 5W, +/- 5%, 100Ω, B/B

| P                                                                                                                                                                                                                                                                                                                                                | R | W | 0 | 5 | W | J | P                                                                                                                                                                                                                                         | 1 | 0                                                                                                                                                                                                                                                                                                                                                                                 | 1 | B | 0 | 0 |                                          |  |                                         |  |                                                                             |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|------------------------------------------|--|-----------------------------------------|--|-----------------------------------------------------------------------------|--|
| <p>Type:</p> <p>PRW0 = PRW</p> <p>PRWA = PRWA</p> <p>PRWC = PRWC</p> <p>PRM0 = PRM</p> <p>PRMA = PRMA</p> <p>PRMB = PRMB</p> <p>PRS0 = PRS</p> <p>PRVA = PRVA</p> <p>PRVB = PRVB</p> <p>PZ1A = PRZA-1</p> <p>PZ2A = PRZA-2</p> <p>PZ3A = PRZA-3</p> <p>PRZC = PRZC</p> <p>PRZD = PRZD</p> <p>PRT0 = PRT</p> <p>PRU0 = PRU</p> <p>PRWI = PRWI</p> |   |   |   |   |   |   | <p>Wattage:</p> <p>1W = 1W</p> <p>2W = 2W</p> <p>3W = 3W</p> <p>4W = 4W</p> <p>5W = 5W</p> <p>7W = 7W</p> <p>AW = 10W</p> <p>BW = 11W</p> <p>HW = 17W</p> <p>FW = 15W</p> <p>20 = 20W</p> <p>25 = 25W</p> <p>30 = 30W</p> <p>40 = 40W</p> |   | <p>Resistance Value:</p> <p>• E-24 series:</p> <p>1<sup>st</sup> digit denotes product type</p> <p>W = Wire-wound type</p> <p>P = Power Film type</p> <p>2<sup>nd</sup> &amp; 3<sup>rd</sup> digits are the significant figures of the resistance</p> <p>4<sup>th</sup> indicates the number of zeros:</p> <p>“J” ~ 0.1, “K” ~ 0.01</p> <p><b>Ex.:</b> 4Ω7 ~ 47J, 4.7KΩ ~ 472</p> |   |   |   |   | <p>Packing Type:</p> <p>B = Bulk/Box</p> |  | <p>Packing Qty:</p> <p>0 = Bulk/Box</p> |  | <p>Additional Information:</p> <p>0 = Standard</p> <p>I = Non-inductive</p> |  |
|                                                                                                                                                                                                                                                                                                                                                  |   |   |   |   |   |   | <p>Tolerance:</p> <p>J = ±5%</p> <p>K = ±10%</p>                                                                                                                                                                                          |   |                                                                                                                                                                                                                                                                                                                                                                                   |   |   |   |   |                                          |  |                                         |  |                                                                             |  |

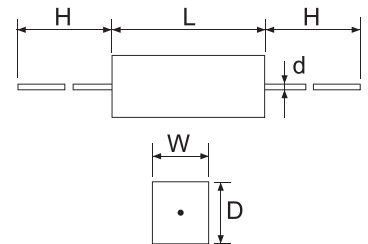
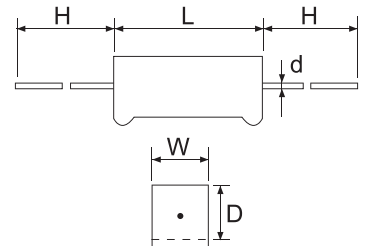
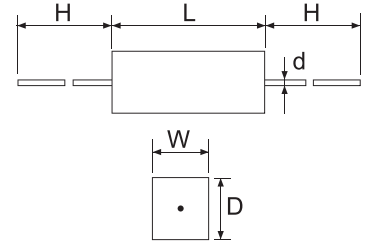
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## Features

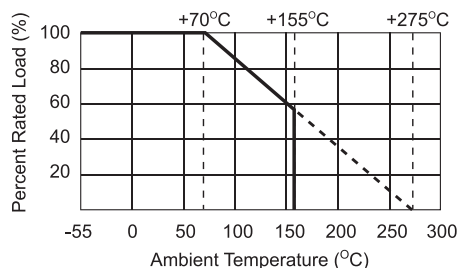
- Self extinguishing
- Excellent flame and moisture resistance
- Extremely small sturdy and mechanically safe
- Non-inductive types available for all ROYALOHM Cement Resistors
- Too low or too high ohmic values on Wire-wound & Power Film type can be supplied on a case to case basis



| Part No.                                                          | Style    | Power Rating at 70℃ | Dimension (mm) |      |     |        |     | Resistance Range |              |
|-------------------------------------------------------------------|----------|---------------------|----------------|------|-----|--------|-----|------------------|--------------|
|                                                                   |          |                     | W±1            | D±1  | L±1 | d±0.05 | H±5 | Wire-wound       | Power Film   |
| PRW Type                                                          |          |                     |                |      |     |        |     |                  |              |
| PRW01W                                                            | PRW 1W   | 1W                  | 6              | 6    | 14  | 0.70   | 25  | 1Ω ~ 27Ω         | 28Ω ~ 33KΩ   |
| PRW02W                                                            | PRW 2W   | 2W                  | 7              | 7    | 18  | 0.75   | 28  | 0.1Ω ~ 27Ω       | 28Ω ~ 33KΩ   |
| PRW03W                                                            | PRW 3W   | 3W                  | 8              | 8    | 22  | 0.75   | 32  | 0.1Ω ~ 39Ω       | 40Ω ~ 56KΩ   |
| PRW05W                                                            | PRW 5W   | 5W                  | 10             | 9    | 22  | 0.75   | 35  | 0.1Ω ~ 47Ω       | 48Ω ~ 100KΩ  |
| PRW07W                                                            | PRW 7W   | 7W                  | 10             | 9    | 35  | 0.75   | 35  | 0.1Ω ~ 680Ω      | 681Ω ~ 200KΩ |
| PRW0AW                                                            | PRW 10W  | 10W                 | 10             | 9    | 49  | 0.75   | 35  | 0.1Ω ~ 910Ω      | 911Ω ~ 200KΩ |
| PRW0FW                                                            | PRW 15W  | 15W                 | 12.5           | 11.5 | 49  | 0.75   | 35  | 1Ω ~ 1KΩ         |              |
| PRW020                                                            | PRW 20W  | 20W                 | 14.5           | 13.5 | 60  | 0.75   | 35  | 2Ω ~ 1.2KΩ       |              |
| PRW025                                                            | PRW 25W  | 25W                 | 14.5           | 13.5 | 64  | 0.75   | 35  | 2Ω ~ 1.2KΩ       |              |
| PRWA Type                                                         |          |                     |                |      |     |        |     |                  |              |
| PRWA2W                                                            | PRWA 2W  | 2W                  | 7              | 7    | 18  | 0.75   | 28  | 0.1Ω ~ 27Ω       | 28Ω ~ 33KΩ   |
| PRWA3W                                                            | PRWA 3W  | 3W                  | 8              | 8    | 22  | 0.75   | 32  | 0.1Ω ~ 39Ω       | 40Ω ~ 56KΩ   |
| PRWA5W                                                            | PRWA 5W  | 5W                  | 10             | 9    | 22  | 0.75   | 35  | 0.1Ω ~ 47Ω       | 48Ω ~ 100KΩ  |
| PRWA7W                                                            | PRWA 7W  | 7W                  | 10             | 9    | 35  | 0.75   | 35  | 0.1Ω ~ 680Ω      | 681Ω ~ 200KΩ |
| PRWAAW                                                            | PRWA 10W | 10W                 | 10             | 9    | 49  | 0.75   | 35  | 0.1Ω ~ 910Ω      | 911Ω ~ 200KΩ |
| PRWC Type                                                         |          |                     |                |      |     |        |     |                  |              |
| PRWC1W                                                            | PRWC 1W  | 1W                  | 5.5            | 5.5  | 12  | 0.70   | 25  | 1Ω ~ 27Ω         | 28Ω ~ 33KΩ   |
| PRWC2W                                                            | PRWC 2W  | 2W                  | 6              | 6    | 18  | 0.75   | 28  | 1Ω ~ 27Ω         | 28Ω ~ 33KΩ   |
| PRWC3W                                                            | PRWC 3W  | 3W                  | 6              | 6    | 20  | 0.75   | 28  | 1Ω ~ 27Ω         | 28Ω ~ 33KΩ   |
| PRWC5W                                                            | PRWC 5W  | 5W                  | 6              | 6    | 25  | 0.75   | 35  | 1Ω ~ 200Ω        | 201Ω ~ 100KΩ |
| PRWC7W                                                            | PRWC 7W  | 7W                  | 9              | 9    | 25  | 0.75   | 35  | 1Ω ~ 200Ω        | 201Ω ~ 100KΩ |
| Remark: Max Working Voltage: 500V<br>Max Overload Voltage: 1,000V |          |                     |                |      |     |        |     |                  |              |



**Derating Curve**  
(PRW, PRM, PRS, PRZ, PRV, PRU)



**Heat Rise Chart**  
(PRW, PRWA, PRWC, PRU)

