

# 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<br>Power Film <100KΩ: ±(5.0% + 0.05Ω)Max<br>≥100KΩ: ±(10.0% + 0.05Ω)Max |
| Load Life                       | Wire-wound ±(5.0% + 0.05Ω)Max<br>Power Film <100KΩ: ±(5.0% + 0.05Ω)Max<br>≥100KΩ: ±(10.0% + 0.05Ω)Max |

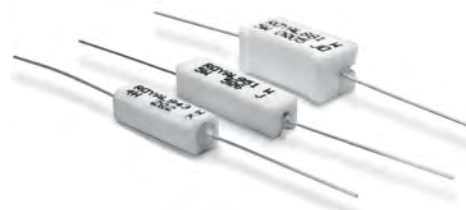
## Ordering Procedure: Ex.: PRW 5W, +/- 5%, 100Ω, B/B

| P                                                                                                                                                                                                                                                                                                            | R | W | 0 | 5                                                                                                                                                                                            | W | J | P                                                                                                                                                                                                                                                                                                                                                 | 1 | 0 | 1 | B                                                                   | 0 | 0 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---------------------------------------------------------------------|---|---|
| <b>Type:</b><br>PRW0 = PRW<br>PRWA = PRWA<br>PRWC = PRWC<br>PRC1 = PRWC-1<br>PRM0 = PRM<br>PRMA = PRMA<br>PRMB = PRMB<br>PRS0 = PRS<br>PRVA = PRVA<br>PRVB = PRVB<br>PZ1A = PRZA-1<br>PZ2A = PRZA-2<br>PZ3A = PRZA-3<br>PRZC = PRZC<br>PRZD = PRZD<br>PRT0 = PRT<br>PRU0 = PRU<br>PRWI = PRWI<br>TFRC = TFRC |   |   |   | <b>Wattage:</b><br>1W = 1W<br>2W = 2W<br>3W = 3W<br>4W = 4W<br>5W = 5W<br>6W = 6W<br>7W = 7W<br>AW = 10W<br>BW = 11W<br>HW = 17W<br>FW = 15W<br>20 = 20W<br>25 = 25W<br>30 = 30W<br>40 = 40W |   |   | <b>Resistance Value:</b><br>• E-24 series:<br>1 <sup>st</sup> digit denotes product type<br>W = Wire-wound type<br>P = Power Film type<br>2 <sup>nd</sup> & 3 <sup>rd</sup> digits are the significant figures of the resistance<br>4 <sup>th</sup> indicates the number of zeros:<br>"J" ~ 0.1, "K" ~ 0.01<br><b>Ex.:</b> 4Ω7 ~ 47J, 4.7KΩ ~ 472 |   |   |   | <b>Packing Type:</b><br>B = Bulk/Box                                |   |   |
|                                                                                                                                                                                                                                                                                                              |   |   |   | <b>Tolerance:</b><br>J = ±5%<br>K = ±10%                                                                                                                                                     |   |   |                                                                                                                                                                                                                                                                                                                                                   |   |   |   | <b>Packing Qty:</b><br>0 = Bulk/Box                                 |   |   |
|                                                                                                                                                                                                                                                                                                              |   |   |   |                                                                                                                                                                                              |   |   |                                                                                                                                                                                                                                                                                                                                                   |   |   |   | <b>Additional Information:</b><br>0 = Standard<br>I = Non-inductive |   |   |

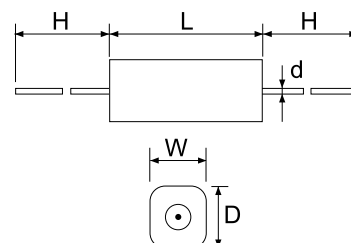
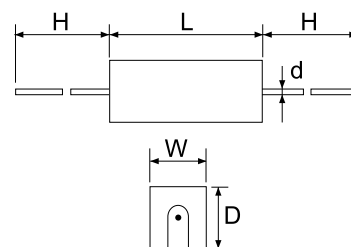
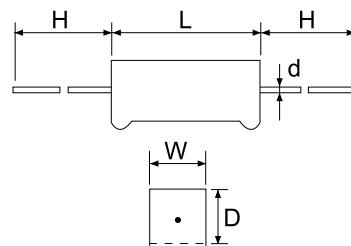
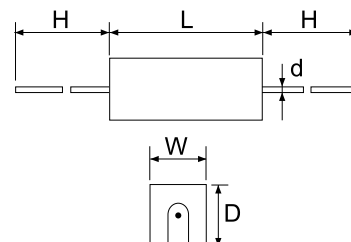
# Cement Fixed Resistors

## Features

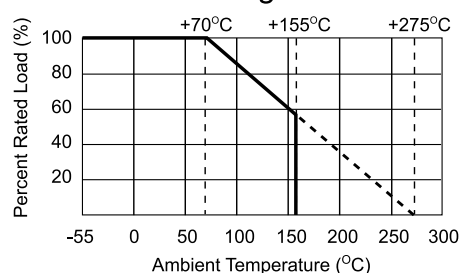
- Self extinguishing
- Excellent flame and moisture resistance
- Extremely small sturdy and mechanically safe
- Non-inductive types available for all ROYALOHM Cement Resistors
- Too low or too high ohmic values on Wire-wound & Power Film type can be supplied on a case to case basis



| Part No.                                                          | Style     | Power Rating<br>at 70°C | 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 |
| PRWC-1 Type                                                       |           |                         |                |      |      |        |     |                  |              |
| PRC14W                                                            | PRWC-1 4W | 4W                      | 6.4            | 6.4  | 20   | 0.70   | 28  | 1Ω ~ 200Ω        | 201Ω ~ 100KΩ |
| PRC15W                                                            | PRWC-1 5W | 5W                      | 6.4            | 6.4  | 25   | 0.70   | 28  | 1Ω ~ 200Ω        | 201Ω ~ 100KΩ |
| PRC16W                                                            | PRWC-1 6W | 6W                      | 6.4            | 6.4  | 38   | 0.75   | 35  | 1Ω ~ 200Ω        | 201Ω ~ 100KΩ |
| Remark: Max Working Voltage: 500V<br>Max Overload Voltage: 1,000V |           |                         |                |      |      |        |     |                  |              |



### Derating Curve



### Heat Rise Chart

