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EN: This Datasheet is presented by the manufacturer.

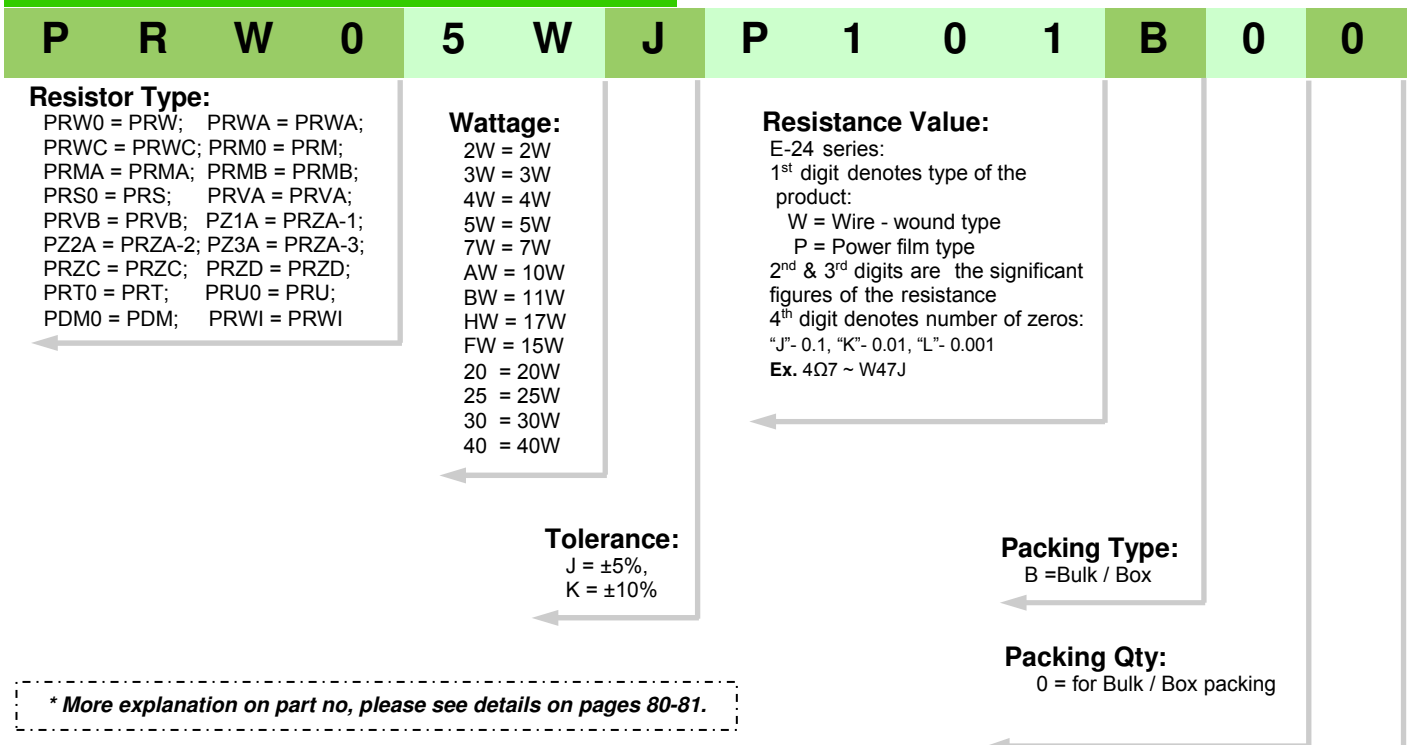
Please visit our website for pricing and availability at www.hestore.hu.

CEMENT FIXED RESISTORS

Features

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

Ordering Procedure: (Ex.: PRW 5W, 5%, 100Ω, B/B)



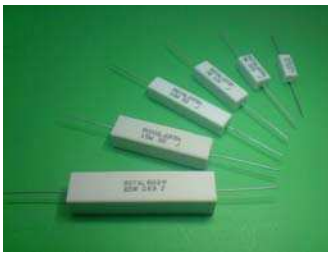
Performance Specifications

| | |
|--|--|
| Temperature coefficient | < 20Ω: ±400PPM/°C; ≥ 20Ω: ±350PPM/°C |
| Short-time overload | $\Delta R/R \leq \pm(5.0\% + 0.05\Omega)$, 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. |
| Solderability | Min. 95% coverage |
| Temperature cycling | $\Delta R/R \leq \pm(2.0\% + 0.05\Omega)$, with no evidence of mechanical damage. |
| Humidity (Steady State) | $\Delta R/R \leq \pm(5.0\% + 0.05\Omega)$, with no evidence of mechanical damage. |
| Load life in humidity | For Wire-wound range, the $\Delta R/R$ is ±5% For Power film range, <100KΩ, the $\Delta R/R$ is ±5% For Power film range, ≥100KΩ, the $\Delta R/R$ is ±10% |
| Load life | For Wire-wound range, the $\Delta R/R$ is ±5% For Power film range, <100KΩ, the $\Delta R/R$ is ±5% For Power film range, ≥100KΩ, the $\Delta R/R$ is ±10% |
| Resistance to soldering heat | $\Delta R/R \pm(1.0\% + 0.05\Omega)$, with no evidence of mechanical damage. |

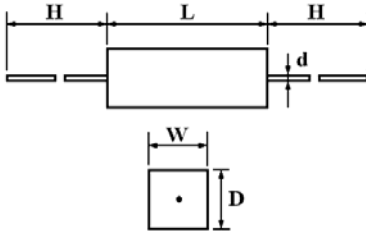
*More details, please see pages 78-79.

Special Feature:
 0 = Standard product
 I = Non-Inductive

CEMENT FIXED RESISTORS

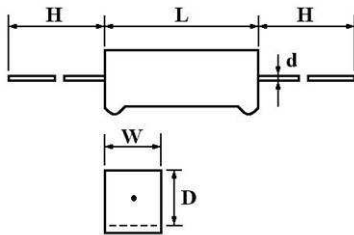


(1) PRW Type



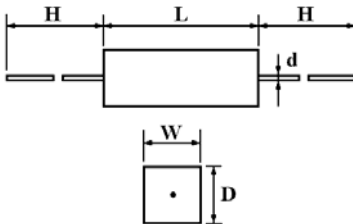
| Part No. | Style | Dimension (mm) | | | | | Resistance Range | |
|----------|-----------|----------------|-------|-------|----------|-------|------------------|--------------|
| | | W ± 1 | D ± 1 | L ± 1 | d ± 0.05 | H ± 5 | Wire-Wound | Power Film |
| PRW01W | PRW - 1W | 6 | 6 | 14 | 0.60 | 25 | 1Ω ~ 27Ω | 28Ω ~ 33KΩ |
| PRW02W | PRW - 2W | 7 | 7 | 18 | 0.75 | 28 | 0.1Ω ~ 27Ω | 28Ω ~ 33KΩ |
| PRW03W | PRW - 3W | 8 | 8 | 22 | 0.75 | 32 | 0.1Ω ~ 39Ω | 40Ω ~ 56KΩ |
| PRW05W | PRW - 5W | 10 | 9 | 22 | 0.75 | 35 | 0.1Ω ~ 47Ω | 48Ω ~ 100KΩ |
| PRW07W | PRW - 7W | 10 | 9 | 35 | 0.75 | 35 | 0.1Ω ~ 680Ω | 681Ω ~ 200KΩ |
| PRW0AW | PRW - 10W | 10 | 9 | 49 | 0.75 | 35 | 0.1Ω ~ 910Ω | 911Ω ~ 200KΩ |
| PRW0FW | PRW - 15W | 12.5 | 11.5 | 49 | 0.75 | 35 | 1Ω ~ 1KΩ | |
| PRW020 | PRW - 20W | 14.5 | 13.5 | 60 | 0.75 | 35 | 2Ω ~ 1.2KΩ | |
| PRW025 | PRW - 25W | 14.5 | 13.5 | 64 | 0.75 | 35 | 2Ω ~ 1.2KΩ | |

(1-1) PRWA Type



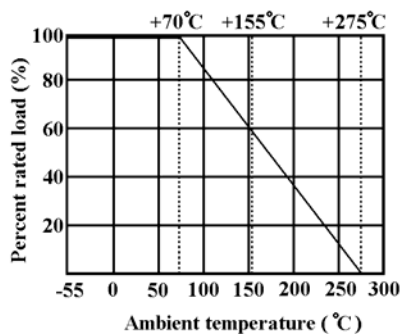
| Part No. | Style | Dimension (mm) | | | | | Resistance Range | |
|----------|------------|----------------|-------|-------|----------|-------|------------------|--------------|
| | | W ± 1 | D ± 1 | L ± 1 | d ± 0.05 | H ± 5 | Wire-Wound | Power Film |
| PRWA2W | PRWA - 2W | 7 | 7 | 18 | 0.75 | 28 | 0.1Ω ~ 27Ω | 28Ω ~ 33KΩ |
| PRWA3W | PRWA - 3W | 8 | 8 | 22 | 0.75 | 32 | 0.1Ω ~ 39Ω | 40Ω ~ 56KΩ |
| PRWA5W | PRWA - 5W | 10 | 9 | 22 | 0.75 | 35 | 0.1Ω ~ 47Ω | 48Ω ~ 100KΩ |
| PRWA7W | PRWA - 7W | 10 | 9 | 35 | 0.75 | 35 | 0.1Ω ~ 680Ω | 681Ω ~ 200KΩ |
| PRWAAW | PRWA - 10W | 10 | 9 | 49 | 0.75 | 35 | 0.1Ω ~ 910Ω | 911Ω ~ 200KΩ |

(1-2) PRWC Type

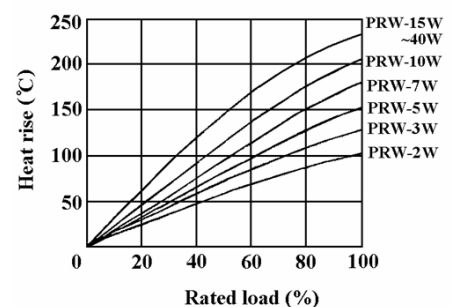


| Part No. | Style | Dimension (mm) | | | | | Resistance Range | |
|----------|-----------|----------------|-------|-------|----------|-------|------------------|--------------|
| | | W ± 1 | D ± 1 | L ± 1 | d ± 0.05 | H ± 5 | Wire-Wound | Power Film |
| PRWC1W | PRWC - 1W | 5.5 | 5.5 | 12 | 0.60 | 25 | 1Ω ~ 27Ω | 28Ω ~ 33KΩ |
| PRWC2W | PRWC - 2W | 6 | 6 | 18 | 0.75 | 28 | 1Ω ~ 27Ω | 28Ω ~ 33KΩ |
| PRWC3W | PRWC - 3W | 6 | 6 | 20 | 0.75 | 28 | 1Ω ~ 27Ω | 28Ω ~ 33KΩ |
| PRWC5W | PRWC - 5W | 6 | 6 | 25 | 0.75 | 35 | 1Ω ~ 200Ω | 201Ω ~ 100KΩ |
| PRWC7W | PRWC - 7W | 9 | 9 | 25 | 0.75 | 35 | 1Ω ~ 200Ω | 201Ω ~ 100KΩ |

Derating Curve

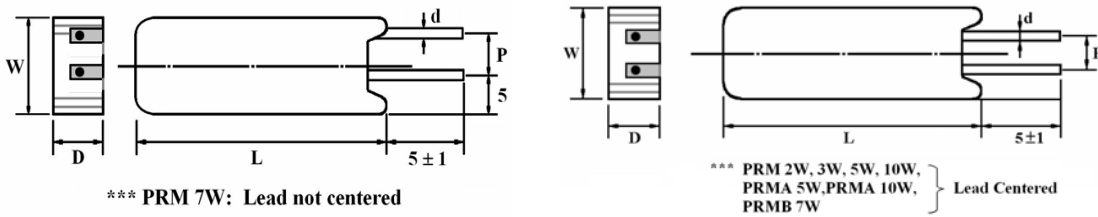


Heat Rise Chart

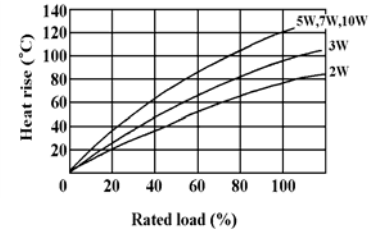


CEMENT FIXED RESISTORS

(2) PRM Type



Heat Rise Chart



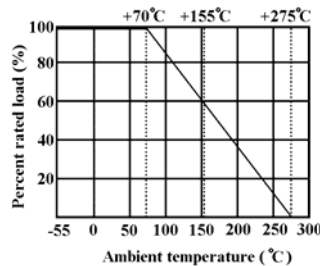
| Part No. | Style | Dimension (mm) | | | | | Resistance Range | |
|----------|----------|----------------|-------|-------|----------|-------|------------------|--------------|
| | | W ± 1 | D ± 1 | L ± 1 | d ± 0.05 | P ± 1 | Wire-Wound | Power Film |
| PRM02W | PRM-2W | 11.5 | 7.5 | 20 | 0.75 | 5 | 0.1Ω ~ 27Ω | 28Ω ~ 33KΩ |
| PRM03W | PRM-3W | 12.5 | 8.5 | 25 | 0.75 | 5 | 0.1Ω ~ 39Ω | 40Ω ~ 56KΩ |
| PRM05W | PRM-5W | 12.5 | 9 | 25 | 0.75 | 5 | 0.1Ω ~ 47Ω | 48Ω ~ 100KΩ |
| PRM07W | PRM-7W | 12.5 | 9 | 38 | 0.75 | 5 | 0.1Ω ~ 680Ω | 681Ω ~ 200KΩ |
| PRM0AW | PRM-10W | 12.5 | 9 | 50 | 0.75 | 5 | 0.1Ω ~ 910Ω | 911Ω ~ 200KΩ |
| PRMA5W | PRMA-5W | 12.5 | 9 | 25 | 0.75 | 7.5 | 0.1Ω ~ 47Ω | 48Ω ~ 100KΩ |
| PRMAAW | PRMA-10W | 16 | 12 | 35 | 0.75 | 7.5 | 0.1Ω ~ 560Ω | 561Ω ~ 100KΩ |
| PRMB7W | PRMB-7W | 12.5 | 9 | 38 | 0.75 | 5 | 0.1Ω ~ 680Ω | 681Ω ~ 200KΩ |



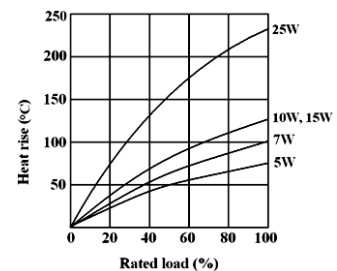
(3) PRS Type



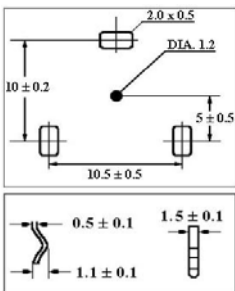
Derating Curve



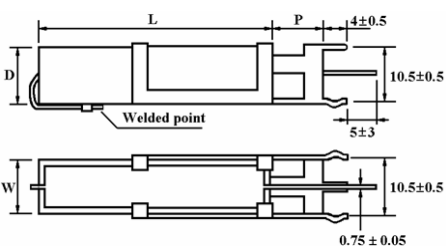
Heat Rise Chart



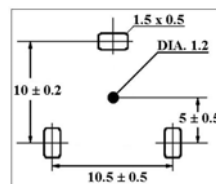
| Part No. | Style | Dimension (mm) ± 1 | | | | Resistance Range | |
|----------|---------|--------------------|------|----|----|------------------|--------------|
| | | W | D | L | P | Wire-wound | Power Film |
| PRS05W | PRS-5W | 10 | 9 | 22 | 5 | 0.1Ω ~ 47Ω | 48Ω ~ 100KΩ |
| PRS07W | PRS-7W | 10 | 9 | 35 | 10 | 0.1Ω ~ 680Ω | 681Ω ~ 200KΩ |
| PRS0AW | PRS-10W | 10 | 9 | 49 | 10 | 0.1Ω ~ 910Ω | 911Ω ~ 200KΩ |
| PRS0FW | PRS-15W | 12.5 | 11.5 | 49 | 11 | 1Ω ~ 1KΩ | |
| PRS020 | PRS-20W | 14.5 | 13.5 | 60 | 10 | 1Ω ~ 3.4KΩ | |
| PRS025 | PRS-25W | 14.5 | 13.5 | 64 | 10 | 1Ω ~ 3.4KΩ | |



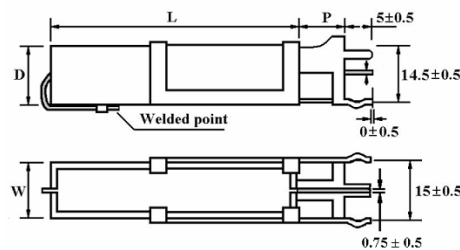
Recommended Hole
7W, 10W, 15W



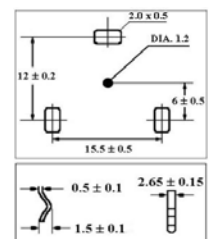
***PRS 5W, 7W, 10W, 15W



Recommended Hole
5W



***PRS 20W, 25W

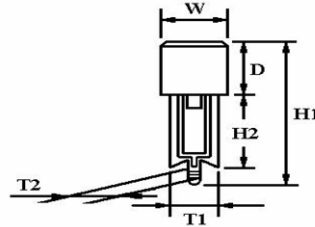
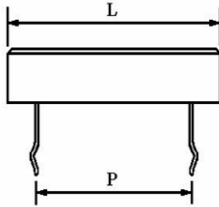


Recommended Hole
20W, 25W

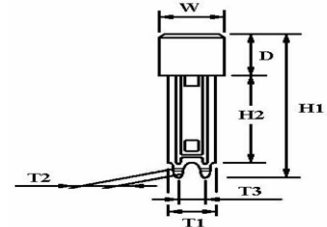
CEMENT FIXED RESISTORS

(4) PRZA-1, PRZA-2, PRZA-3, PRZC, PRZD Type

PRZA-1, PRZA-2, PRZA-3, PRZC, PRZD



PRZC, PRZD



Recommendable Hole

| Power Rating at 70°C | Dimension (mm) | | P |
|----------------------|------------------------|------------|----------|
| | PRZA-1, PRZA-2, PRZA-3 | PRZC, PRZD | |
| 5W | | | 9.5 / 15 |
| 7W | | | 22 |
| 10W | | | 32 / 35 |
| 15W | | | 32 |
| 20W | | | 45 |

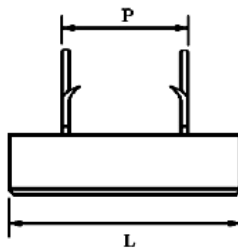
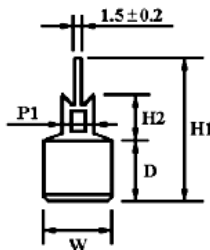
CEMENT FIXED RESISTORS

Dimension (mm)

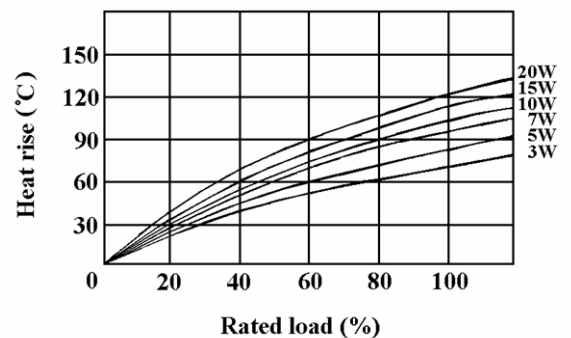
| Part No. | Power Rating at 70°C | Type | Dimension (mm) | | | | | | | | | Resistance Range | |
|----------|----------------------|--------|----------------|--------|----------|-----------|--------------------|----------------------|----------------------|--|--|------------------|-----------------|
| | | | W ± 1 | D ± 1 | L | P ± 1.5 | T ₁ ± 1 | T ₂ ± 0.2 | T ₃ ± 0.5 | H ₁ ⁺² / ₋₁ | H ₂ ⁺² / ₋₁ | Wire-wound | Power Film |
| PZ1A5W | 5W | PRZA-1 | 10 | 9 | 25 ± 1 | 9.5 | 7 | 1.6 | | 24 | 10 | 0.1 Ω ~ 120 Ω | 121 Ω ~ 56 K Ω |
| | | | | | 27 ± 1 | 15 | | | | | | | |
| PZ2A5W | | PRZA-2 | 10 | 9 | 27 ± 1 | 15 | 7 | 1.6 | | 39 | 25 | | |
| PZ3A5W | | PRZA-3 | 10 | 9 | 27 ± 1 | 15 | 7 | 1.3 | | 39 | 25 | | |
| PRZC5W | | PRZC | 10 | 9 | 27 ± 1 | *15 | 7 | 1.5 | 3.5 | 36 | 22 | | |
| PRZD5W | PRZD | 10 | 9 | 27 ± 1 | 15 | 7 | 1.5 | 3.5 | 24 | 10 | | | |
| PZ1A7W | 7W | PRZA-1 | 10 | 9 | 35 ± 1 | 22 | 7 | 1.6 | | 24 | 10 | 0.1 Ω ~ 560 Ω | 561 Ω ~ 100 K Ω |
| PZ2A7W | | PRZA-2 | 10 | 9 | 35 ± 1 | 22 | 7 | 1.6 | | 39 | 25 | | |
| PRZC7W | | PRZC | 10 | 9 | 35 ± 1 | *22 | 7 | 1.5 | 3.5 | 36 | 22 | | |
| PRZD7W | | PRZD | 10 | 9 | 35 ± 1 | 22 | 7 | 1.5 | 3.5 | 24 | 10 | | |
| PZ1AAW | 10W | PRZA-1 | 10 | 9 | 48 ± 1.5 | 32 / 35 | 7 | 1.6 | | 24 | 10 | 1 Ω ~ 820 Ω | 821 Ω ~ 100 K Ω |
| PZ2AAW | | PRZA-2 | 10 | 9 | 48 ± 1.5 | 32 / 35 | 7 | 1.6 | | 39 | 25 | | |
| PRZCAW | | PRZC | 10 | 9 | 48 ± 1.5 | *32 / *35 | 7 | 1.5 | 3.5 | 36 | 22 | | |
| PRZDAW | | PRZD | 10 | 9 | 48 ± 1.5 | 32 / 35 | 7 | 1.5 | 3.5 | 24 | 10 | | |
| PZ1AFW | 15W | PRZA-1 | 12.5 | 11.5 | 48 ± 1.5 | 32 | 10 | 3 | | 35 | 15 | 1 Ω ~ 1 K Ω | |
| PZ2AFW | | PRZA-2 | 12.5 | 11.5 | 48 ± 1.5 | 32 | 10 | 3 | | 47 | 30 | | |
| PRZCFW | | PRZC | 12.5 | 11.5 | 48 ± 1.5 | *32 | 10 | 2 | 5 | 47 | 30 | | |
| PZ1A20 | 20W | PRZA-1 | 12.5 | 13.5 | 63 ± 1.5 | 45 | 10 | 3 | | 35 | 15 | 2 Ω ~ 1.2 K Ω | |
| PZ2A20 | | PRZA-2 | 12.5 | 13.5 | 63 ± 1.5 | 45 | 10 | 3 | | 47 | 30 | | |
| PRZC20 | | PRZC | 12.5 | 13.5 | 63 ± 1.5 | *45 | 10 | 2 | 5 | 47 | 30 | | |

*PRZC Type Pitch Tolerance = +2 ~ +6

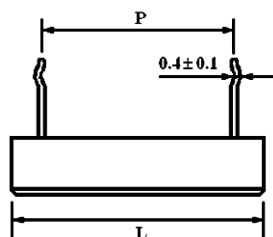
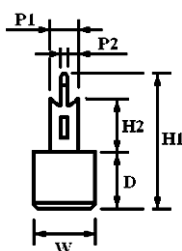
(5) PRVA Type



Heat Rise Chart (PRVA / PRVB)



(6) PRVB Type

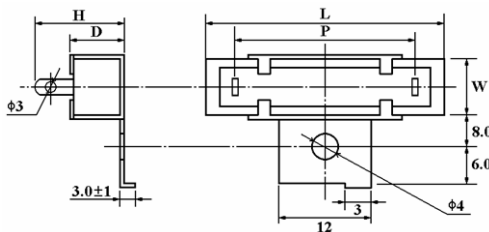


CEMENT FIXED RESISTORS

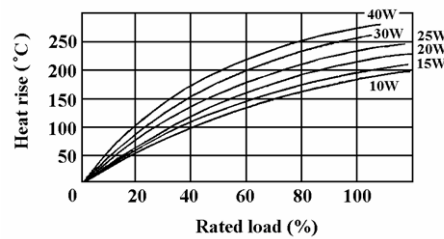
| Part No. | Power Rating at 70°C | Dimension (mm) ± 1 | | | | | | | | Resistance Range | |
|---------------|----------------------|--------------------|------|---------|----------|----------------|----------------|----------------|-----------------------|------------------|--------------|
| | | W | D | L | P | P ₁ | H ₁ | H ₂ | *P ₂ ± 0.2 | Wire-wound | Power Film |
| PRVA3W/PRVB3W | 3W | 10.0 | 9.0 | 22 | 9.5 | 5 | 25.0 | 10.5 | 1.3 | 0.1Ω ~ 47Ω | 48Ω ~ 33KΩ |
| PRVA5W/PRVB5W | 5W | 10.0 | 9.0 | 27 / 25 | 15 / 9.5 | 5 | 25.0 | 10.5 | 1.3 | 0.1Ω ~ 120Ω | 121Ω ~ 56KΩ |
| PRVA7W/PRVB7W | 7W | 10.0 | 9.0 | 35 | 22 | 5 | 25.0 | 10.5 | 1.3 | 0.1Ω ~ 560Ω | 561Ω ~ 100KΩ |
| PRVAAW/PRVBAW | 10W | 10.0 | 9.0 | 48 | 35 / 32 | 5 | 25.0 | 10.5 | 1.3 | 1Ω ~ 820Ω | 821Ω ~ 100KΩ |
| PRVAFW/PRVBFW | 15W | 12.5 | 11.5 | 48 | 32 | 5 | 27.5 | 10.5 | 1.5 | 1Ω ~ 1KΩ | |
| PRVA20/PRVB20 | 20W | 12.5 | 13.5 | 63 | 45 | 5 | 29.5 | 10.5 | 1.5 | 1Ω ~ 1.2KΩ | |

*P₂ for PRVB

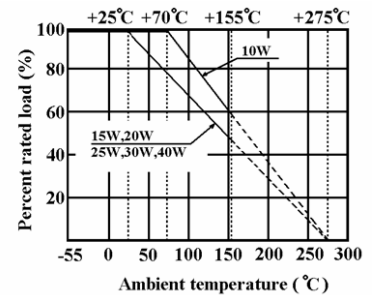
(7) PRT Type



Heat Rise Chart (PRT)

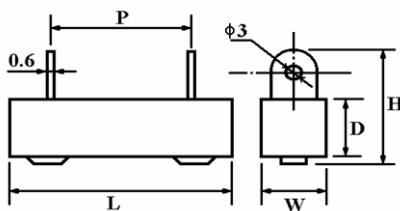


Derating Curve



| Part No. | Style | Power Rating at 70°C | Dimension (mm) ± 1 | | | | | | Resistance Range | |
|----------|-----------|----------------------|--------------------|------|----|----|--------|----|------------------|--------------|
| | | | W | D | L | P | H | T | Wire-wound | Power Film |
| PRT0AW | PRT - 10W | 10W | 10 | 9 | 48 | 32 | 18 | 12 | 1Ω ~ 820Ω | 821Ω ~ 100KΩ |
| PRT0FW | PRT - 15W | 15W | 12.5 | 11.5 | 48 | 32 | 21 | 12 | 1Ω ~ 1KΩ | |
| PRT020 | PRT - 20W | 20W | 12.5 | 13.5 | 63 | 45 | 21 | 12 | 2Ω ~ 1.2KΩ | |
| PRT030 | PRT - 30W | 30W | 19 | 19 | 75 | 56 | 32 Max | 18 | 3Ω ~ 1.5KΩ | |
| PRT040 | PRT - 40W | 40W | 19 | 19 | 90 | 70 | 32 Max | 18 | 6Ω ~ 1.5KΩ | |

(8) PRU Type



| Part No. | Style | Power Rating at 70°C | Dimension (mm) ± 1 | | | | | Resistance Range | |
|----------|-----------|----------------------|--------------------|------|----|----|---------|------------------|--------------|
| | | | W | D | L | P | H | Wire-Wound | Power Film |
| PRU0AW | PRU - 10W | 10W | 10.0 | 9 | 48 | 32 | 18 | 1Ω ~ 820Ω | 821Ω ~ 100KΩ |
| PRU0FW | PRU - 15W | 15W | 12.5 | 11.5 | 48 | 32 | 21 | 1Ω ~ 1KΩ | |
| PRU020 | PRU - 20W | 20W | 12.5 | 13.5 | 63 | 45 | 21 | 2Ω ~ 1.2KΩ | |
| PRU030 | PRU - 30W | 30W | 19.0 | 19 | 75 | 56 | 32 Max. | 3Ω ~ 1.5KΩ | |
| PRU040 | PRU - 40W | 40W | 19.0 | 19 | 90 | 70 | 32 Max. | 6Ω ~ 1.5KΩ | |

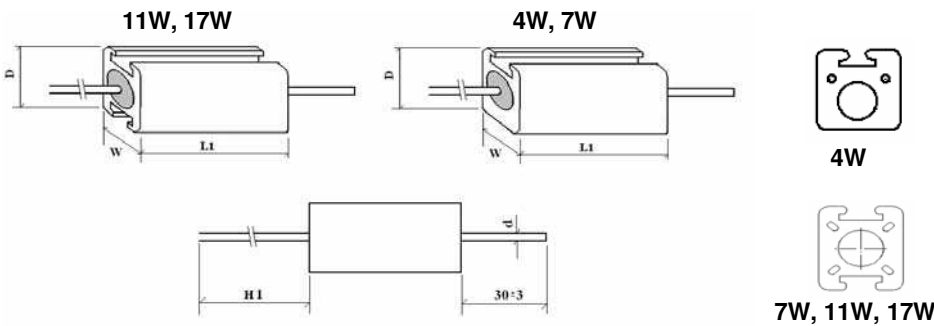
CEMENT FIXED RESISTORS

Features

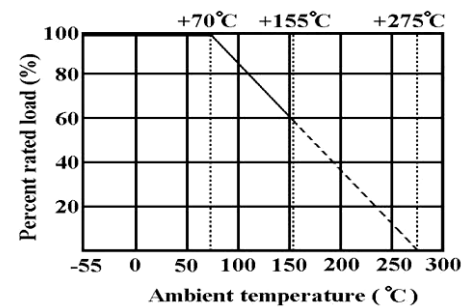
- Vertical or Axial type
- Available in 4W, 7W, 11W & 17W
- Can withstand high overload current
- Non flammable
- Extremely small, sturdy and mechanically safe
- Special solvent resistance



PRWI SERIES



Derating curve:



Dimension (mm)

| Type | Power Rating at 70°C | W ± 1 | D ± 1.5 | L1 ± 1 | H1 ± 5 | d ± 0.05 | Low Resistance Range | Standard Resistance Range | High Resistance Range |
|----------|----------------------|-------|---------|--------|--------|----------|----------------------|---------------------------|-----------------------|
| PRWI 4W | 4W | 7 | 8 | 20 | 56 | 0.75 | 0.1Ω ~ 0.9Ω | 1Ω ~ 1KΩ | 1.1KΩ ~ 6.8KΩ |
| PRWI 7W | 7W | 7 | 8 | 38 | 70 | 0.75 | 0.33Ω ~ 0.9Ω | 1Ω ~ 10KΩ | 10.1KΩ ~ 22KΩ |
| PRWI 11W | 11W | 9 | 10 | 50 | 85 | 0.75 | 0.56Ω ~ 0.9Ω | 1Ω ~ 10KΩ | 10.1KΩ ~ 23KΩ |
| PRWI 17W | 17W | 9 | 10 | 75 | 110 | 0.75 | 1Ω ~ 9.9Ω | 10Ω ~ 10KΩ | 10.1KΩ ~ 39KΩ |

Performance Specifications

| | |
|--|---|
| Temperature coefficient | ± 400PPM/°C depends on resistance value. |
| 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 break down. |
| Terminal strength | No evidence of mechanical damage. |
| Solderability | Min.95% coverage |
| Load life in humidity | ± (5.0% + 0.05Ω) Max, with no evidence of mechanical damage. |
| Load life | ± (5.0% + 0.05Ω) Max, with no evidence of mechanical damage. |
| Resistance to solder heat | ± (1.0% + 0.05Ω) Max, with no evidence of mechanical damage. |

* More details, please see pages 78-79.

*Ordering procedure is same as Cement Fixed Resistors (page 36)