# HIGH POWER WIRE WOUND RESISTOR
## HRW Series: Non-Flammable, Wire Wound

RoHS

## FEATURES

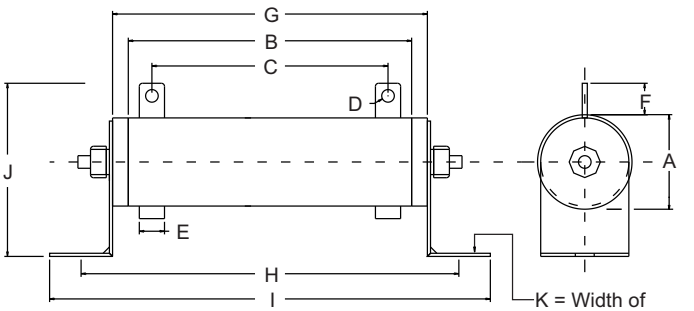
- Non-Flammable
- Wire Wound

## PART NUMBER EXAMPLE

**HRW A 10W-10R-J-HS**

- Series
- Type
- Wattage
- Resistance
- Tolerance J=5%
- Hardware

A type : Fixed Resistor
B type : Fixed with a tap
C type : Adjustable Resistor
N type : Non-inductively wound




Hardware: HS = Screw in bracket
HP = Press in Bracket
HX = Special
Omit = No Hardware

## DIMENSION & RESISTANCE RANGE

| Power Rating Watts | Dimensions (m/m) | | | | | | | | | | | Resistance Range Ohms |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A± 1 | B± 2 | C± 2 | D± 0.1 | E± 0.2 | F ± 1 | G± 2 | H± 2 | I ± 2 | J ± 2 | K± 0.1 | |
| 10W | 12.5 | 45 | 37 | 2.1 | 4 | 10.5 | 46 | 53 | 63 | 28 | 4 | 1 ~ 5K |
| 20W | 16.5 | 60 | 40 | 3 | 5 | 12 | 70 | 78 | 97 | 42 | 4 | 1 ~ 10K |
| 30W | 16.5 | 80 | 60 | 3 | 5 | 12 | 90 | 98 | 117 | 42 | 4 | 1 ~ 15K |
| 40W | 16.5 | 110 | 99 | 3 | 5 | 12 | 120 | 128 | 147 | 42 | 4 | 1 ~ 20K |
| 50W | 25 | 110 | 94 | 5.2 | 8 | 19 | 120 | 142 | 164 | 58 | 6 | 0.1 ~ 25K |
| 60W | 28 | 90 | 72 | 5.2 | 8 | 17.6 | 101 | 125 | 145 | 60 | 6 | 0.1 ~ 30K |
| 80W | 28 | 110 | 92 | 5.2 | 8 | 17.6 | 121 | 145 | 165 | 60 | 6 | 0.1 ~ 40K |
| 100W | 28 | 140 | 122 | 5.2 | 8 | 17.6 | 151 | 175 | 195 | 60 | 6 | 0.1 ~ 50K |
| 120W | 28 | 160 | 142 | 5.2 | 8 | 17.6 | 171 | 195 | 215 | 60 | 6 | 0.1 ~ 60K |
| 150W | 28 | 195 | 177 | 5.2 | 8 | 17.6 | 206 | 230 | 250 | 60 | 6 | 0.1 ~ 75K |
| 160W | 35 | 185 | 167 | 5.2 | 8 | 18 | 197 | 219 | 249 | 75 | 8 | 0.1 ~ 80K |
| 200W | 35 | 210 | 190 | 5.2 | 8 | 18 | 222 | 244 | 274 | 75 | 8 | 0.1 ~ 100K |
| 250W | 40 | 210 | 186 | 5.5 | 10 | 17.5 | 224 | 245 | 277 | 88.8 | 9 | 0.5 ~ 125K |
| 300W | 40 | 260 | 241 | 5.5 | 10 | 17.5 | 273 | 294 | 327 | 88.8 | 9 | 0.5 ~ 150K |
| 400W | 40 | 330 | 305 | 5.5 | 10 | 17.5 | 343 | 362 | 396 | 88.8 | 9 | 0.5 ~ 200K |
| 500W | 50 | 330 | 298 | 6.4 | 12 | 25.5 | 346 | 367 | 400 | 99 | 10 | 0.5 ~ 250K |
| 600W | 50 | 400 | 368 | 6.4 | 12 | 25.5 | 416 | 437 | 470 | 99 | 10 | 1 ~ 300K |
| 700W | 50 | 460 | 428 | 6.4 | 12 | 25.5 | 475 | 497 | 528 | 99 | 10 | 0.5 ~ 350K |
| 800W | 60 | 460 | 420 | 6.4 | 15 | 28 | 480 | 502 | 533 | 112 | 10 | 1 ~ 400K |
| 1000W | 60 | 540 | 500 | 6.4 | 15 | 28 | 560 | 582 | 613 | 110 | 10 | 1 ~ 500K |
| 1300W | 65 | 650 | 615 | 6.4 | 15 | 31 | 672 | 696 | 725 | 125 | 10 | 1 ~ 600K |



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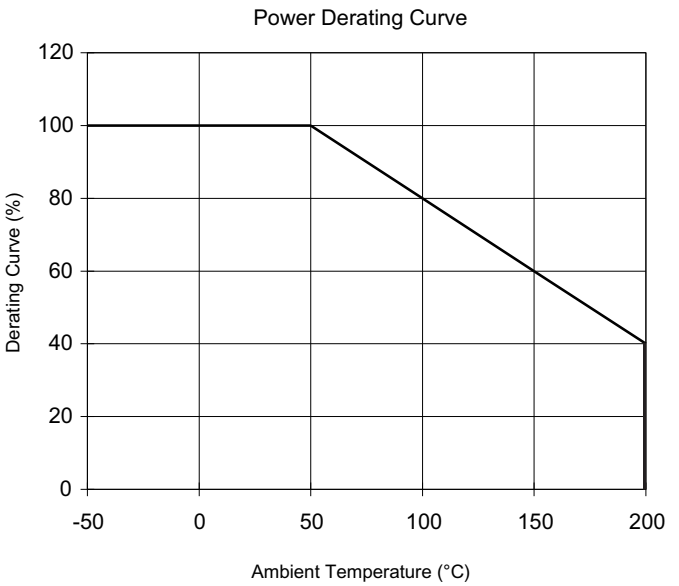
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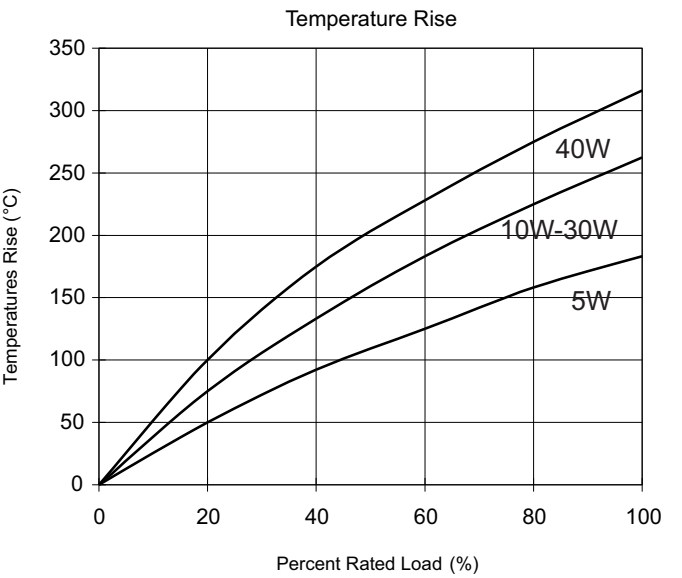
RoHS

## ELECTRICAL CHARACTERISTICS

| Parameter | Specification | Test methods |
|---|---|---|
| Resistance and tolerance | Resistance Nominal Resistance Tolerance<br>1Ω ≤ R ±5%(J)<br>1Ω > R ±10%(K) | JIS-C-5202 5-1 |
| Temperature coefficient | ±200PPM/°C max | JIS-C-5202 5-2b |
| Power rating load | ΔR/R ≤ ± (2%+0.05Ω)<br>(Temperature) 350°C max. | JIS-C-5202 5-4 |
| Short-time overload | 250% rated power 5 seconds<br>ΔR/R ≤ ± (2%+0.05Ω) | JIS-C-5201 4.13 |
| Insulation resistance | DC500V 100MΩ min. | JIS-C-5202 5-6 |
| Dielectric withstanding voltage | AC3000V 1 minute | JIS-C-5202 5-7 |

## ELECTRICAL CURVES

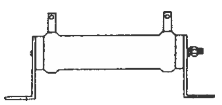


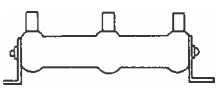

## SHORT-TIME OVERLOAD RATING

| (Second) Load Time | 1 | 2 | 3 | 4 | 5 | 10 | 30 | 60 | 180 | 300 | 600 | 900 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (%) Power Increase | 2600 | 2000 | 1600 | 1400 | 1300 | 1000 | 600 | 450 | 200 | 150 | 120 | 110 |

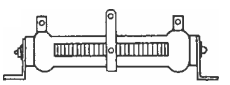
## BODY TYPE CONFIGURATIONS (All Diagrams showing HS type hardware)



. Type A (Fixed Resistor)



Type B (Fixed With Tap)



Type C (Adjustable Resistor)



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