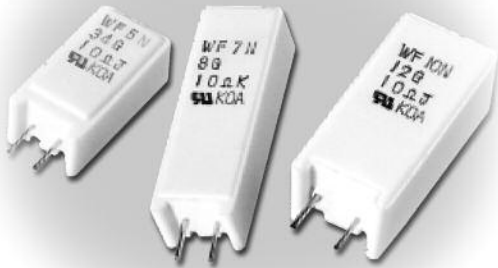
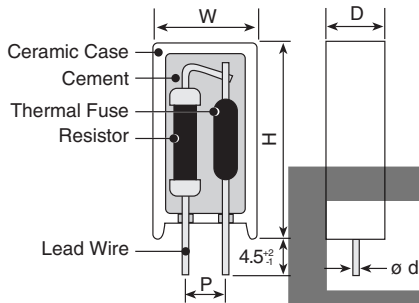


features

- Wide resistance range and thermal cut-off temperature
- Resistor with quick current break ability for cement resistor and thermal fuse
- Products with lead-free terminations meet EU RoHS requirements. Pb located in glass material, electrode and resistor element is exempt per Annex 1, exemption 5 of EU directive 2005/95/EC



dimensions and construction



| Type | Dimensions inches (mm) | | | | d ±0.1 (R. Lead) | d ±0.1 (Fuse Lead) |
|-------|-------------------------|------------------------|-------------------------|---|---------------------|-----------------------|
| | W | D | H | P | | |
| WF5N | .512±.039 (13.0±1.0) | .354±.039 (9.0±1.0) | 1.00±.059 (25.5±1.5) | .197 ^{+0.079} _{-.039} | .031 (0.8) | 2A: 0.6 10A: 1.0 |
| WF7N | | | 1.52±.059 (38.5±1.5) | (5 ⁺² ₋₁) | | |
| WF10N | .630±.039 (16.0±1.0) | .472±.039 (12±1.0) | 1.38±.059 (35±1.5) | .295 ^{+0.079} _{-.039} (7.5 ⁺² ₋₁) | | |

ordering information

| | | | | | | |
|-----------|-----------------|------------------------------|---------------------|---|---|----------------------|
| WF | 5N | C | 8 | G | 100 | K |
| Type | Style | Terminal Surface Temperature | Thermal Fuse Symbol | Resistor Material | Nominal Resistance | Resistance Tolerance |
| | 5N 7N 10N | C: SnCu | See table below | G: Glass core wire wound S: Metal oxide film | 2 significant figures + 1 multiplier "R" indicates decimal on values <10Ω | J: ±5% K: ±10% |

applications and ratings

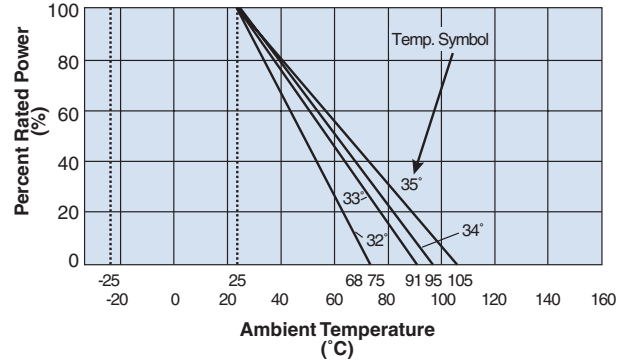
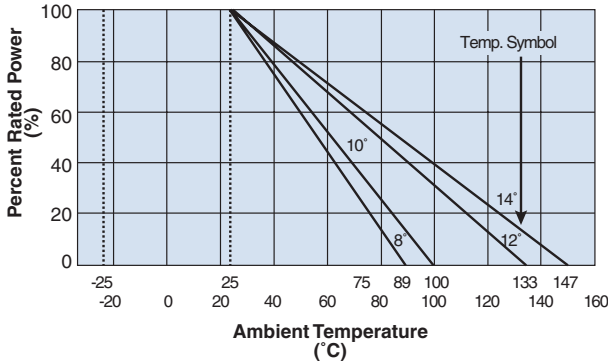
| Thermal Fuse Symbol | Thermal Fuse | | | Power Rating (W) | | | Resistance Range/Material (Ω) | | Resistance Tolerance | | Maximum Working Voltage | Maximum Overload Voltage | Operating Temperature Range |
|---------------------|---------------------------------|----------------|------------------|------------------|-----|-----|-------------------------------|---------------------|-------------------------|---------------------|-------------------------|--------------------------|-----------------------------|
| | Thermal Cut-off Temp. | Current Rating | Voltage Rating** | 5N | 7N | 10N | G: Glass Core Wirewound | S: Metal Oxide Film | G: Glass Core Wirewound | S: Metal Oxide Film | | | |
| 8 | 129±2 | 10A | AC 250V | 1.6 | 2.0 | 2.5 | 1 - 100 (E24) | 110 - 10k (E24) | J: ±5% K: ±10% | J: ±5% | E = √P • R | √P • R • 6.25 | -20°C~+89°C |
| 10 | 150 ⁺¹ ₋₃ | | | 1.6 | 2.0 | 2.5 | | | | | | | -20°C~+100°C |
| 12 | 188 ⁺³ ₋₁ | | | 2.0 | 2.4 | 3.5 | | | | | | | -20°C~+133°C |
| 14 | 227±2 | | | 2.0 | 2.4 | 3.5 | | | | | | | -20°C~+147°C |
| 32 | 110±2 | 2A | | 1.2 | 1.4 | — | | | | | | | -20°C~+75°C |
| 33 | 126 ⁺³ ₋₂ | | | 1.4 | 1.6 | — | | | | | | | -20°C~+91°C |
| 34 | 129±3 | | | 1.6 | 2.0 | — | | | | | | | -20°C~+95°C |
| 35 | 146 ⁺³ ₋₂ | | | 1.6 | 2.0 | — | | | | | | | -20°C~+105°C |

* Other combinations of thermal cut-off temperatures and resistance values are available on request

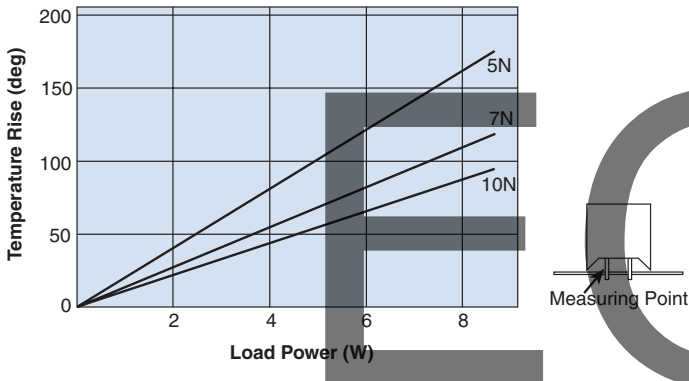
** Rated Voltage of Resistors= √Power Rating x Resistance Value.

environmental applications

Derating Curve



Temperature Rise



For resistors operated at an ambient temperature of 25°C or above, a power rating shall be derated in accordance with the above rating curves.

Performance Characteristics

| Parameter | Requirement $\Delta R \pm(\%+0.05\Omega)$ | | Test Method |
|------------------------------|--|-------------|--|
| | Limit | Typical | |
| Resistance | Within specified tolerance | — | 25°C |
| T.C.R. | $\pm 250 \times 10^{-6}/K$ (G) $\pm 300 \times 10^{-6}/K$ (S) | — | +25°C/-55°C and +25°C/+125°C* |
| Overload (Short Time) | $\pm 2\%$ | $\pm 0.5\%$ | Rated voltage x 6.25 for 5 seconds |
| Resistance to Soldering Heat | $\pm 1\%$ | $\pm 0.3\%$ | 350°C \pm 10°C, 3.5 seconds |
| Moisture Resistance | $\pm 5\%$ | $\pm 2\%$ | 40°C, 90% - 95% RH, 500 hours, No load |
| Load Life | $\pm 5\%$ | $\pm 2\%$ | Rated voltage, 25°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle |

* The upper limit of Operating Temperature Range or 125°C, whichever is lower