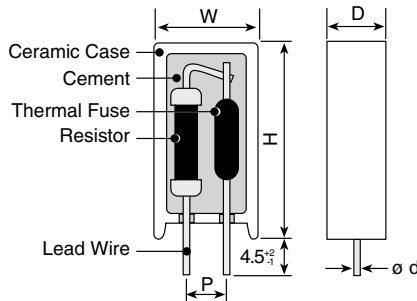


**features**

- Wide resistance range and thermal cut-off temperature
- Resistor with quick current break ability for cement resistor and thermal fuse
- Marking: Ceramic body with alpha/numeric marking
- 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)					
	W	D	H	P	d (R. Lead)	d (Fuse Lead)
WF5N	.512±.039 (13.0±1.0)	.354±.039 (9.0±1.0)	1.00±.059 (25.5±1.5)	.197 <sup>+0.079</sup> <sub>-.039</sub>	.031 (0.8)	2A: 0.6 10A: 1.0
WF7N			1.52±.059 (38.5±1.5)	(5 <sup>+2</sup> <sub>-1</sub> )		
WF10N	.630±.039 (16.0±1.0)	.472±.039 (12±1.0)	1.38±.059 (35±1.5)	.295 <sup>+0.079</sup> <sub>-.039</sub> (7.5 <sup>+2</sup> <sub>-1</sub> )		

**ordering information**

New Part #	<b>WF</b>	<b>5N</b>	<b>C</b>	<b>8</b>	<b>G</b>	<b>100</b>	<b>K</b>
	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**

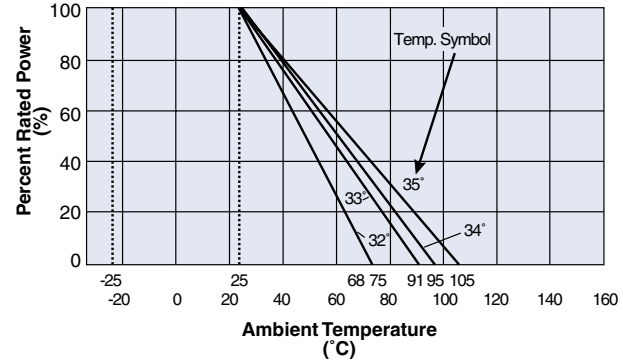
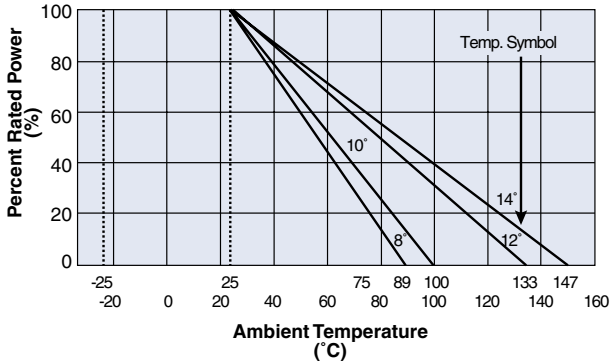
Thermal Fuse Symbol	Thermal Fuse			Power Rating (W)			Resistance Range/Material (Ω)		Resistance Tolerance		Maximum Working Voltage	Maximum Overload Voltage	Operating Temperature Range
	Thermal Cut-off Temp.	Current Rating	Voltage Rating**	5N	7N	10N	G: Glass Core Wirewound	S: Metal Oxide Film	G: Glass Core Wirewound	S: Metal Oxide Film			
8	129±2 (STD)	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	152±2			-20°C~+100°C									
12	188 <sup>+3</sup> <sub>-1</sub>			-20°C~+133°C									
14	226 <sup>+1</sup> <sub>-3</sub>			-20°C~+147°C									
32	110±2			-20°C~+75°C									
33	126±2			-20°C~+91°C									
34	130±2 (STD)			-20°C~+95°C									
35	146 <sup>+3</sup> <sub>-2</sub>	2A	1.6	2.0	—	-20°C~+105°C							

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

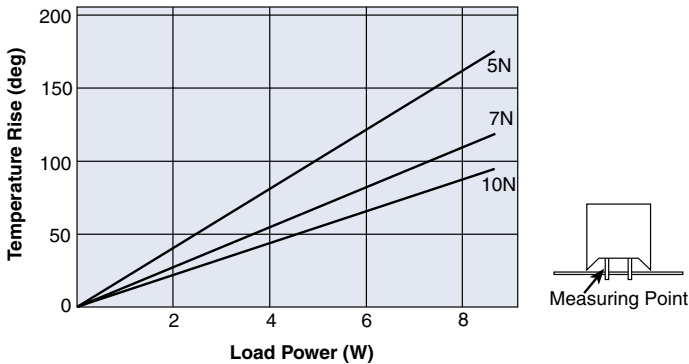
\*\* Rated Voltage of Resistors= √Power Rating x Resistance Value.

## 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)	$\pm 2\%$	$\pm 1.8\%$	Rated voltage x 6.25 for 5 seconds
Resistance to Soldering Heat	$\pm 1\%$	$\pm 0.9\%$	350°C $\pm$ 10°C, 3.5 seconds
Moisture Resistance	$\pm 5\%$	$\pm 4.5\%$	40°C, 90% - 95% RH, 500 hours, No load
Load Life	$\pm 5\%$	$\pm 4.5\%$	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