

WIRE WOUND RESISTORS

KNP SERIES

10W, 15W

Feature

- Small size and low cost.
- Super heat dissipation, instant overload capability.
- Standard tolerance: $\pm 1\%$, $\pm 5\%$
- Standard Value: E24 series as range below
- Lettering marking
- Available in non-inductive style (As NKNP type)
- Flameproof coating, silicone paint meet UL 94-V-0
- Operating temperature : $-55^{\circ}\text{C} \sim +275^{\circ}\text{C}$

Material

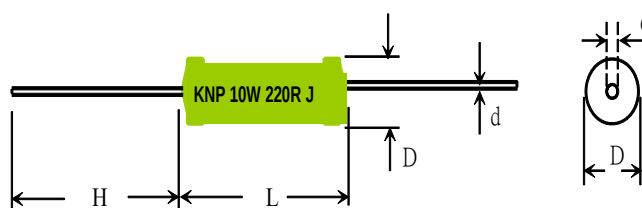
Element: Alloy Resistance Wire

Core: High purity ceramic Al_2O_3

Termination: Standard solder-plated copper lead

Coating: Green silicone

Dimension



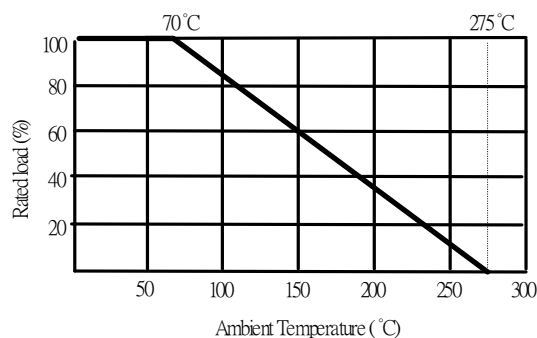
General Specification

TYPE	DIMENSION (mm)				POWER RATING	MAXIMUM WORKING VOLT.	RESISTANCE RANGE	
	$L \pm 1.0$	$D \pm 1.0$	$H \pm 3.0$	$d \pm 0.05$			STANDARD	MAXIMUM
KNP10W	42.0	8.0	38.0	0.80	10W	$E = \sqrt{P \cdot R}$	$2\Omega \sim 1\text{K}\Omega$	$4.7\text{K}\Omega$
KNP15W	53.0	8.0	38.0	0.80	15W		$2\Omega \sim 1.5\text{K}\Omega$	$4.7\text{K}\Omega$

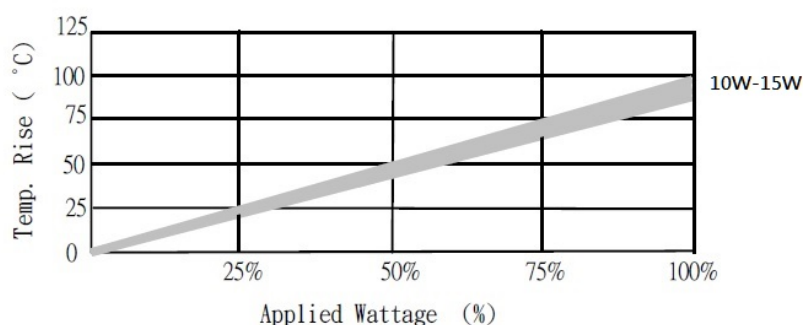
* Maximum overload voltage equals to $\sqrt{P \cdot R \times 10}$

** Resistance values out of standard range is available on request.

Derating Curve



Temperature Rise



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Characteristics

Item	Requirement	Test Method
Short Time Overload	$\pm(2\%+0.05\Omega)$	JIS-C-5201-1 5.5 RCWV*2.5 or Max. overload voltage for 5 seconds
Insulation Resistance	$> 1000M\Omega$	JIS-C-5201-1 5.6 Apply 100VDC for 1 minute
Endurance	$\pm(5\%+0.05\Omega)$	JIS-C-5201-1 7.10 70 $\pm$ 2 $^{\circ}$ C, Max. RCWV for 1000 hrs with 1.5 hrs "ON" and 0.5hrs "OFF"
Damp Heat with Load	$\pm(5\%+0.05\Omega)$	JIS-C-5201-1 7.9 40 $\pm$ 2 $^{\circ}$ C, 90~95% R.H. RCWV for 1000 hrs with 1.5 hrs "ON" and 0.5hrs "OFF"
Solder ability	90% min. Coverage	JIS-C-5201-1 6.5 245 $\pm$ 5 $^{\circ}$ C for 3 seconds
Dielectric Withstanding Voltage	400V	JIS-C-5201-1 5.7 Apply Max. Overload Voltage for 1 minute
Temperature Coefficient	$\pm 250PPM/^{\circ}C$	Resistance value at room temperature and room Temperature+100 $^{\circ}$ C
Pulse Overload	$\pm(1\%+0.05\Omega)$	JIS-C-5201-1 5.8 4 times RCWV for 10000 cycles with 1 second "ON" and 25 seconds "OFF"
Resistance To Solvent	No deterioration of coatings and markings	JIS-C-5201-1 6.9 Trichroethane for 1 min. with ultrasonic
Terminal Strength	Tensile: ≥ 2.5 kg	Direct Load for 10 seconds In the direction off the terminal leads
Shelf Life	$\Delta R=\pm 0.1\%$	12 months at room temperature 25 $\pm$ 3 $^{\circ}$ C, 80%RH Max.

***Storage Temperature : 25 $\pm$ 3 $^{\circ}$ C; Humidity<80%RH**

Part Numbering

<u>KNP10W</u>	<u>J</u>	<u>B</u>	-	<u>10R</u>
↓	↓	↓		↓
Type/Power	Tol.	Package		Resistance
KNP10W	F= $\pm$ 1%	B=Bulk		0R1 = 0.1 Ω
KNP15W	J= $\pm$ 5%			10R = 10 Ω
				1K2R = 1.2K Ω