



Wirewound Resistors

TYPE A: KNP Series

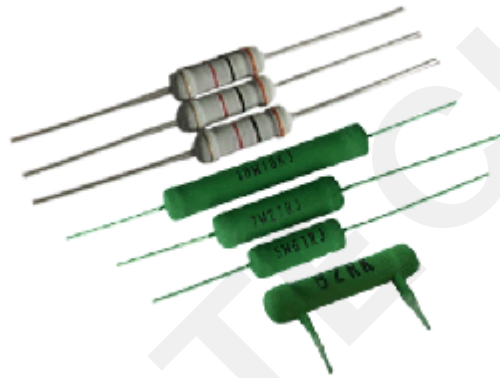
TYPE B: KNZ Series

TYPE C: NKNP Series Non-inductive

Power Rating: 1/2W-30W

Resistance Value: 0.01Ω-100KΩ

Resistance Tolerance: ±0.1%, ±0.5%, ±1%, ±5%, ±10%



● Construction:

1. Leads are welded to the end caps. Plated caps (with leads) are force-fitted before the assembly is trimmed using advanced equipment to ensure excellent performance and low electrical noise.
2. Winding resistance wires around non-alkaline heat-resistance ceramic core which is added with an outer layer of heat and humidity resistance and non-corrosive protective material, and a coating of silicon resin paint.
3. For high resistance value, wires are replaced by metal oxide films.

● Features:

1. Gray, green, and black are available. KNP and KNPN 1/2W-5W, marks are ring; KNP and KNPN 5W-30W and KNZ, marks are letters.
2. Standard type & non-inductive type available; marks are ring or letter available.
3. Low noise, resistance to high temperature, low temperature coefficient, high overload power, surface nonflammable.
4. For non-standard technical requirements and custom special applications, please contact us to discuss the details.
5. Delivery: 5-7 days
6. Conforms to the ROHS standard and the LEAD-FREE non-lead standard.

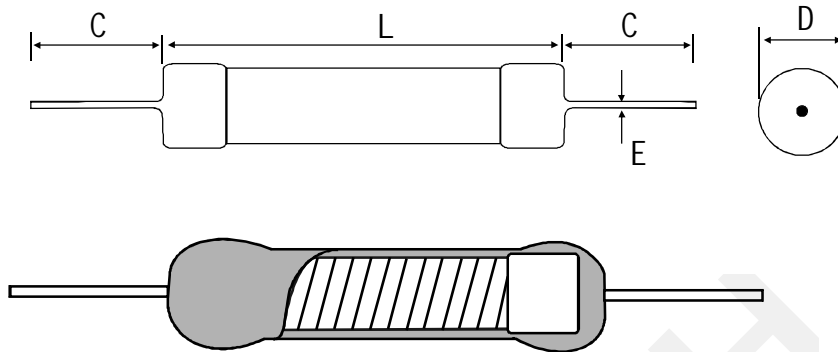
● Applications:

Widely used in circuit. Ballast, Power tools, Consumer applications, Power supplies, Welders, High voltage applications, Home entertainment, appliances.

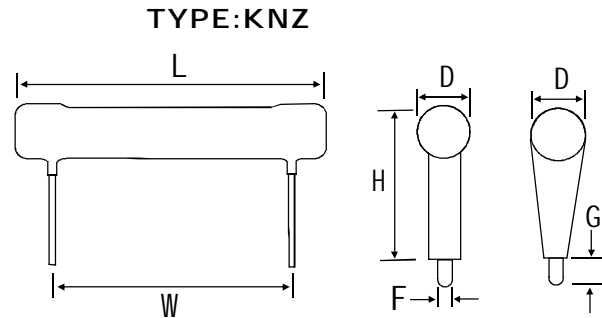


● **Dimensions**

TYPE:KNP & NKNP



POWER RATING	KNP & NKNP				RESISTANCE(Ω)		DIELECTRIC WITHSTANDING VOLTAGE
	L±1	D±0.5	C±1	E±0.05	KNP	NKNP	
1/2W	9	3.5	25	0.65	0.1-82	0.05-41	300V
1W	10.5	4.5	30	0.65	0.1-100	0.05-50	300V
1Ws	9	3.5	25	0.65	0.1-82	0.05-41	300V
2W	15	5	30	0.78	0.1-220	0.05-110	350V
2Ws	10.5	4.5	30	0.78	0.1-100	0.05-50	300V
3W	17	6	30	0.78	0.1-510	0.05-255	400V
3Ws	15	5	30	0.78	0.1-220	0.05-110	350V
5W	24	8	30	0.78	0.1-1.5K	0.05-750	500V
5Ws	17	6	30	0.78	0.1-510	0.05-255	400V
7W	31	8	30	0.78	0.1-3K	0.05-1.5K	500V
7Ws	24	8	30	0.78	0.1-1.5K	0.05-750	500V
8W	31	8	30	0.78	0.1-3K	0.05-1.5K	500V
8Ws	24	8	30	0.78	0.1-1.5K	0.05-750	500V
10W	41	8	30	0.78	0.1-8K	0.05-4K	500V
10Ws	31	8	30	0.78	0.1-3K	0.05-1.5K	500V
15W	52	8	30	0.78	0.1-10K	0.05-5K	500V
20W	61	8	30	0.78	0.1-12K	0.05-6K	500V
25W	61	8	30	0.78	0.1-12K	0.05-6K	500V
30W	70	8	30	0.78	0.1-15K	0.05-7.5K	500V
1.We can do the resistors following customer special requirement.							
2.For high resistance value,wires are replaced by metal oxide films.							

**● Dimensions**

POWER RATING	KNZ & NKNZ						RESISTANCE(Ω)		DIELECTRIC WITHSTANDING VOLTAGE
	L±0.5	D±0.5	H±1	G±1	W±1	F±0.5	KNZ	NKNZ	
2.5W	19	5	10	4	10	1	0.1-220	0.05-110	300V
4W	24	5	10	4	15	1	0.1-220	0.05-110	400V
5W	24	8	23	4.5	14	3	0.1-1.5K	0.05-750	500V
6W	24	8	23	4.5	14	3	0.1-1.5K	0.05-750	500V
7W	31	8	23	4.5	22	3	0.1-3K	0.05-1.5K	500V
8W	31	8	23	4.5	22	3	0.1-3K	0.05-1.5K	500V
10W	41	8	23	4.5	32	3	0.1-8K	0.05-4K	500V
15W	52	8	23	4.5	42	3	0.1-10K	0.05-5K	500V
20W	61	8	23	4.5	52	3	0.1-12K	0.05-6K	500V
25W	61	8	23	4.5	52	3	0.1-12K	0.05-6K	500V
30W	70	8	23	4.5	62	3	0.1-15K	0.05-7.5K	500V

1. We can do the resistors following customer special requirement.

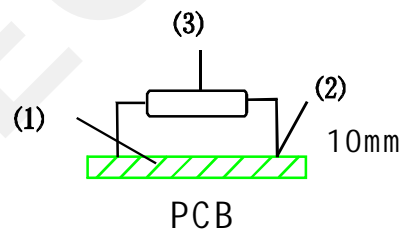
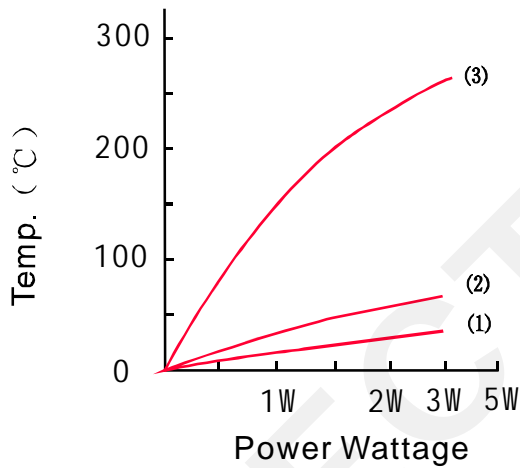
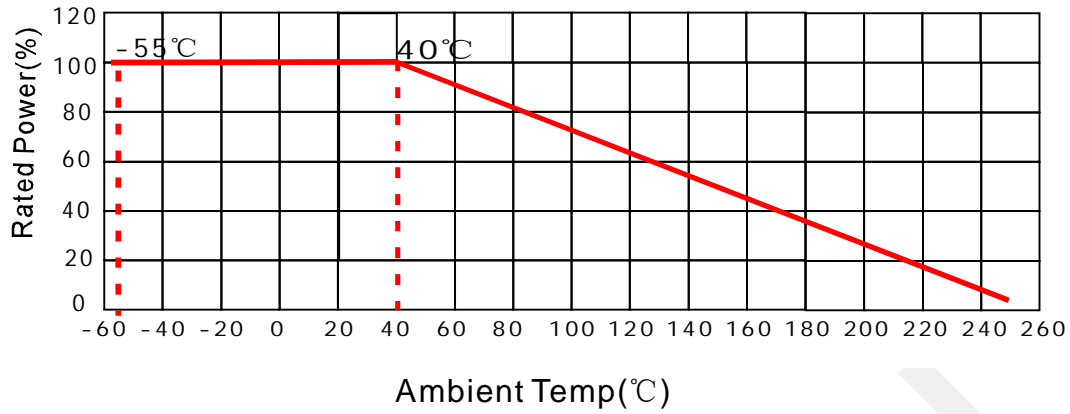
2. For high resistance value, wires are replaced by metal oxide films.

● Performance Specifications

Test item	Test condition	Specifications
Resistance tolerance	JIS-C-5202 5-1	Resistance Nominal Tolerance $1 \leq R < 10 \leq R \pm 5\%(J) \pm 10\%(K)$
Temperature coefficient	JIS-C-5202 5-2 -55°C~155°C	$\pm 350 \text{PPM}/^\circ\text{C}$ Max
Short-term over load	JIS-C-5202 5-5 1000% rated power 5s for KN, 250% rated voltage 5s for MO	$\Delta R \leq \pm(2\%+0.05\Omega)$
Rated Load	Rated wattage 30 min	$\Delta R \leq \pm(2\%+0.05\Omega)$
Effect of Soldering	JIS-C-5202 6-4 235°C 3s	$\Delta R \leq \pm(0.2\%+0.05\Omega)$
Insulation Resistance	JIS-C-5202 5-6	Over 1000MΩ
Moisture Resistance	JIS-C-5202 7-9 1000hr	$\Delta R \leq \pm(2\%R_0+0.05\Omega)$
Moisture-Proof Load Life	JIS-C-5202 7-10 40°C 95% RH on ~ off cycle 1000 hrs.	$\Delta R \leq \pm(5\%R_0+0.1\Omega)$
Nonflammability	500%,1000%,1600% power rating 5min	not flamed



Derating



How To Order

KN	1W	10R	J	P
Type	Rated Power (W)	Resistance Value(Ω)	Tolerance(%)	Package
KNP NKNP KNZ	1/2W-30W	0.01Ω-100KΩ	B=±0.1% D=±0.5% F=±1% J=±5% K=±10%	T B

NOTE:
T: means Tape, B: means Bulk