



# General Resistors

## Precision Power Wirewound Resistors - KNP-R Series / 精密功率绕线电阻器

Precision power wirewound resistors KNP-R series meeting MIL-R-26E (U and V characteristics) and surface temperature (hot spot) 375°C max. Resistors with a wide range of 0.01Ω ~ 82kΩ, covering applications from precision to power. Products with lead-free terminations meet EU RoHS and China RoHS requirements. Direct provides wirewound resistors (KNP-R).



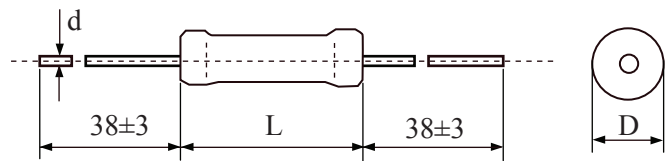
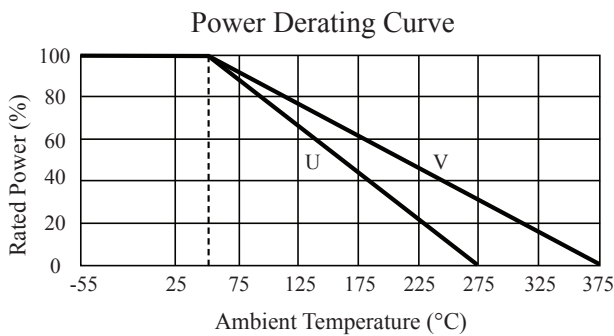
### Characteristics U:

275°C Maximum hot spot temperature. 1% Maximum ΔR in 1000 hours load life.

### Characteristics V:

375°C Maximum hot spot temperature. 3% Maximum ΔR in 1000 hours load life.

Token KNP-R series have an operating temperature range of -55°C ~ +375°C, They must be derated at high ambient temperatures according to the chart below.



### ► Technical Specifications

Type	MIL - R-26E	Power Rating (W)		Max. Working Voltage (V)		Resistance Range (Ω)				Dimensions (mm)			
		U	V	U	V	0.1%	0.25%	0.5%	1%	3%	5%	L±0.81	D±0.81
KNP-R1/4	-	0.40	-	20	-	10~950	1~3.4K				6.35	1.98	0.51
KNP-R1/2	RW70	0.75	-	29	-	10~1.3K	1~4.9K				7.92	1.98	0.51
KNP-R1A	-	1.00	-	53	-	1~2.7K	0.1~10.4K				10.31	2.36	0.64
KNP-R1	RW69	1.10	-	62	-	1~4.0K	0.1~15K				13.49	2.36	0.64
KNP-R2A	-	2.50	3.25	138	157	1~8.6K	0.01~32.3K				12.70	5.33	0.81
KNP-R2	RW79	3.00	3.75	135	148	1~5K	0.01~2K				13.49	4.06	0.81
KNP-R3A	-	3.00	3.75	135	148	1~6.5K	0.01~34.5K				14.27	5.33	0.81
KNP-R3	-	3.25	4.75	185	220	1~11.4K	0.01~42.1K				20.62	5.33	1.02
KNP-R4	RW67	4.00	5.50	210	250	1~12.7K	0.01~47.1K				15.88	7.62	1.02
KNP-R5	RW74	5.00	6.50	330	376	0.5~24.5K	0.01~51K				22.22	7.62	1.02
KNP-R7	RW68	7.00	9.00	504	576	0.5~41.4K	0.01~75K				30.94	9.52	1.02
KNP-R10	RW78	10.00	13.00	799	911	0.5~71.3K	0.01~82K				45.21	9.52	1.02



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## ► Electrical Performance - Wirewound Resistor

Test Items	Test Method	Specifications
Short Time Overload	2.5 times of rated voltage 5 sec.	$\Delta R \pm (2\% + 0.05\Omega)$
Rated Load	Rated wattage 30 minutes.	$\Delta R \pm (1\% + 0.05\Omega)$
Voltage Withstanding	500VAC 1 minute.	$\Delta R \pm (1\% + 0.05\Omega)$
Insulation Resistance	500V	20M $\Omega$
Temp. Cycle	-20°C ~ 85°C 5 cycles	$\Delta R \pm (1\% + 0.05\Omega)$
Soldering After Resistance	235°C for 3 sec	$\Delta R \pm (0.5\% + 0.05\Omega)$
Incombustibility	16 times of rated wattage for 5 min.	Not flamed
Load Life	+25°C, 1.5Hrs on ~ 0.5Hrs off cycle, 1000 Hrs.	U: $\Delta R \pm (1\% + 0.05\Omega)$ V: $\Delta R \pm (3\% + 0.05\Omega)$

## ► How to Order

KNP-R3A	U	3R85	B	P
❶	❷	❸	❹	❺

❶ Product type

❷ Characteristic

Code	Characteristic
U	275°C
V	375°C

❸ Resistance

Code	Resistance
R100	0.1 $\Omega$
1R	1 $\Omega$
100R	100 $\Omega$
1KR	1000 $\Omega$

❹ Resistance Tolerance

Code	Resistance Tolerance
B	$\pm 0.1\%$
C	$\pm 0.25\%$
D	$\pm 0.5\%$
F	$\pm 1\%$
H	$\pm 3\%$
J	$\pm 5\%$

❺ Packaging

Code	Packaging
TB	Taping Box
P	Bulk