

# Wirewound Resistors

## Wirewound Resistors are Getting Economical Solution to Board Population

### ▶ Preview

Token has launched its commercial wirewound resistor yet with the introduction of the various package size. Matching price with size to provide an economical solution to board population, Token's wire wound resistors are available in 15 standard size power ranging from 0.5W to 12.5W, all at 1%, 2%, and 5% tolerance.

The KNP series has been designed to give enhanced pulse handling capability and increased flameproof protection. The series is RoHS compliant with Pb-free terminations, and KNP wire-wound series can also be supplied with radial, goalpost or lancet preformed leads.

The KNP drive to miniaturise is as widespread within industrial process control and circuit break products as it is in the consumer sector. These resistors are ideal for high reliability industrial application as the technology removes the excessive temperature risk.

Produced on a high purity ceramic substrate, the resistor is assembled with interference-fit end caps to which are welded terminations. The resistive element is wound on the substrate and welded to the caps. Flameproof silicone cement coating is applied prior to marking with indelible link. The components are then leadformed, if required.

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### ▶ Applications

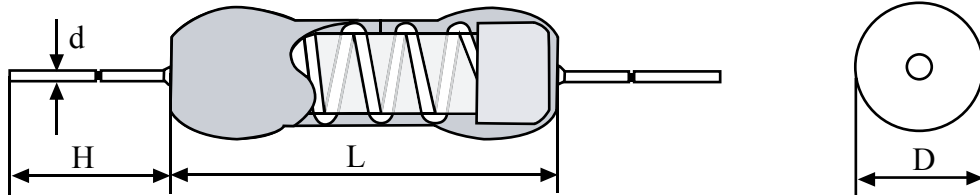
- Ballast
- Power tools
- Consumer applications
- Power supplies, Welders
- High voltage applications
- Home entertainment, appliances

### ▶ Features

- Low cost
- Excellent pulse load capability
- A wide resistance range 0.1  $\Omega$  to 3 k $\Omega$
- Operating temperature range -55°C ~ 155°C
- A wide range of power ratings 0.5W to 12.5W
- Products with Pb-free Terminations and RoHS compliant



## General Specifications



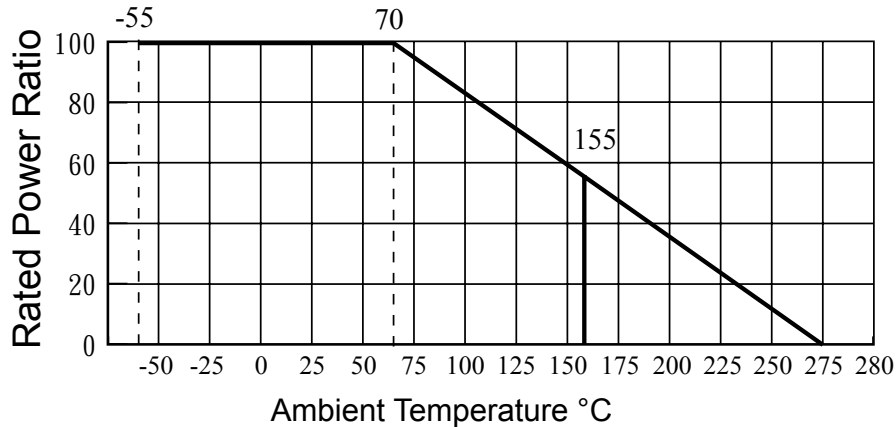
Type	Rated Watts	Dimensions (mm)				Resistance Range ( $\Omega$ )	Tolerance
		$D \pm 0.5$	$L \pm 1$	$H \pm 3$	$d \pm 0.05$		
KNP-50	1/2W	4	9.0	26	0.50~0.55	0.1-50 $\Omega$	$\pm 1\%$ $\pm 2\%$ $\pm 5\%$
KNP-100	1W	4	9.0	26	0.50~0.55	0.1-50 $\Omega$	
KNP-100B	1W	4.5	11.5	26	0.75~0.80	0.1-100 $\Omega$	
KNP-200	2W	4.5	11.5	26	0.75~0.80	0.1-100 $\Omega$	
KNP-200B	2W	5.5	15.5	35	0.75~0.80	0.1-200 $\Omega$	
KNP-300	3W	5.5	15.5	35	0.75~0.80	0.1-200 $\Omega$	
KNP-400	4W	6.5	17.5	35	0.75~0.80	0.1-300 $\Omega$	
KNP-500	5W	6.5	17.5	35	0.75~0.80	0.1-400 $\Omega$	
KNP-500B	5W	8.5	24.5	38	0.75~0.80	0.1-400 $\Omega$	
KNP-600	6W	8.5	24.5	38	0.75~0.80	0.1-1K $\Omega$	
KNP-700	7W	8.5	24.5	38	0.75~0.80	0.1-1.5K $\Omega$	
KNP-800	8W	8.5	42	38	0.75~0.80	0.1-2K $\Omega$	
KNP-1000	10W	8.5	42	38	0.75~0.80	0.1-2K $\Omega$	
KNP-1000B	10W	8.5	54	38	0.75~0.80	0.1-3K $\Omega$	
KNP-1250	12.5W	8.5	54	38	0.75~0.80	0.1-3K $\Omega$	

## Application Notes

### Wire-wound Resistors Application Notes:

- When being used in AC circuits, some wirewound structures give inductance ingredients or parasitic capacity, so they may cause unusual phenomena such as oscillations etc. Quorum deviations of other components should be carefully taken into account for use.
- Application and Placement: Wire wound resistors use different gauges of wire as resistance elements. Sometimes the gauge is extremely thin (finer than a strand of human hair) and very susceptible to breakage in environments containing salts, ash, dust and corrosives. Avoid utilization in such environments.
- Do not install in dusty areas because the accumulation will cause shorts and poor conductance.

## Electrical Performance



TEST ITEMS	CONDITION	SPEC
Resistance Temp. Coeff.	-55 °C ~ 155 °C	± 300 PPM / °C
Resistance Temp. Coeff.	Room temperature/100 °C up	± 300 PPM / °C
Short Time Overload	10 times of rated wattage for 5 sec.	± 2 %
Rated Load	Rated wattage 30 min.	± 1 %
Voltage Withstanding	500VAC 1 min	± 1 %
Temperature Cycling	-20 °C ~ 85 °C 5 cycles	± 1 %
Load Life	70 °C on ~ off cycle 1000 hrs.	± 5 %
Moisture-Proof Load Life	40 °C 95% RH on ~ off cycle 500 hrs.	± 3 %
Incombustibility	16 times of rated wattage for 5 min	not flamed

## How to Order

KNP-100

❶

1W

❷

10R

❸

J

❹

P

❺

❶ Part Number: KNP

❷ Rated Power (W)

❸ Resistance Value (Ω)

Code	Resistance Value
0R1	0.1Ω
1R	1RΩ
10R	10RΩ
100R	100RΩ
1K	1000Ω

❹ Resistance Tolerance (%)

Code	Resistance Tolerance
F	±1%
G	±2%
J	±5%

❺ Package

Code	Package
TB	Taping Box
P	Bulk

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