

Wirewound Resistors - KNP-series

FEATURES

- Small size and low cost
- Super heat dissipation, instant overload capability
- Flameproof coating
- Standard Tolerance: $\pm 5\%$ (available 1% - 5%)
- Standard Value: E24 series as range below
- Color band marking
- Working Temperature Range: $-40^{\circ}\text{C} \sim +275^{\circ}\text{C}$
- UL94-V0 flameproof coating
- Miniature size available (As KNP-S type)

1/2W~5W



7W~10W



MATERIAL

- Core: High purity ceramic Al_2O_3
- Element: Alloy Resistance Wire
- Termination: Standard solder-plated copper lead
- Coating: Green silicone



GENERAL SPECIFICATION



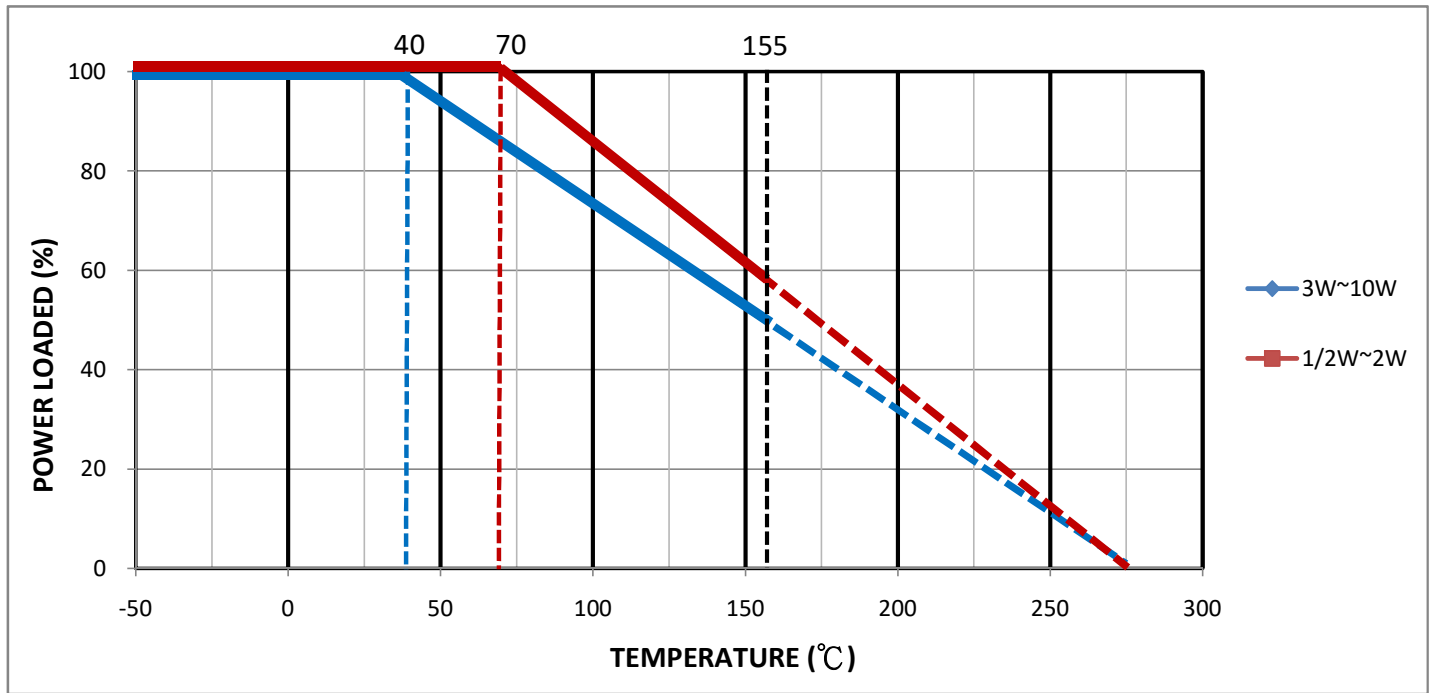
TYPE	DIMENSION (mm)				POWER RATING	MAXIMUM WORKING VOLT.	RESISTANCE RANGE	
	L	D	H	$d \pm 0.05$			STANDARD	MIN / MAX
KNP1/2W&1WS	9.0 ± 2.0	3 ± 2.0	27 ± 3.0	0.70	1/2W/1W	$E = \sqrt{P \times R}$	$0.1 \Omega \sim 80 \Omega$	220R
KNP1W&2WS	11.0 ± 2.0	4 ± 2.0	33 ± 3.0	0.80	1W/2W		$0.1 \Omega \sim 100 \Omega$	0R02~0R091/470R
KNP2W&3WS	15.0 ± 2.0	5 ± 2.0	33 ± 3.0	0.80	2W/3W		$0.1 \Omega \sim 100 \Omega$	0R02~0R091/1K
KNP3W&5WS	17.0 ± 2.0	6 ± 2.0	33 ± 3.0	0.80	3W/5W		$0.1 \Omega \sim 100 \Omega$	0R02~0R091/1K
KNP5W&7WS	25.0 ± 2.0	8 ± 2.0	38 ± 3.0	0.80	5W/7W		$0.1 \Omega \sim 100 \Omega$	Consult factory / 1K
KNP7W	30.0 ± 3.0	8 ± 2.0	38 ± 3.0	0.80	7W		$0.1 \Omega \sim 100 \Omega$	Consult factory
KNP8W / 10WS	42.0 ± 3.0	8 ± 2.0	38 ± 3.0	0.80	8W / 10WS		$0.1 \Omega \sim 100 \Omega$	Consult factory
KNP10W	54.0 ± 3.0	8 ± 2.0	38 ± 3.0	0.80	10W		$0.1 \Omega \sim 100 \Omega$	Consult factory

* Maximum overload voltage equals to $2.5 \times \sqrt{P \times R}$, P=wattage power, R=resistance

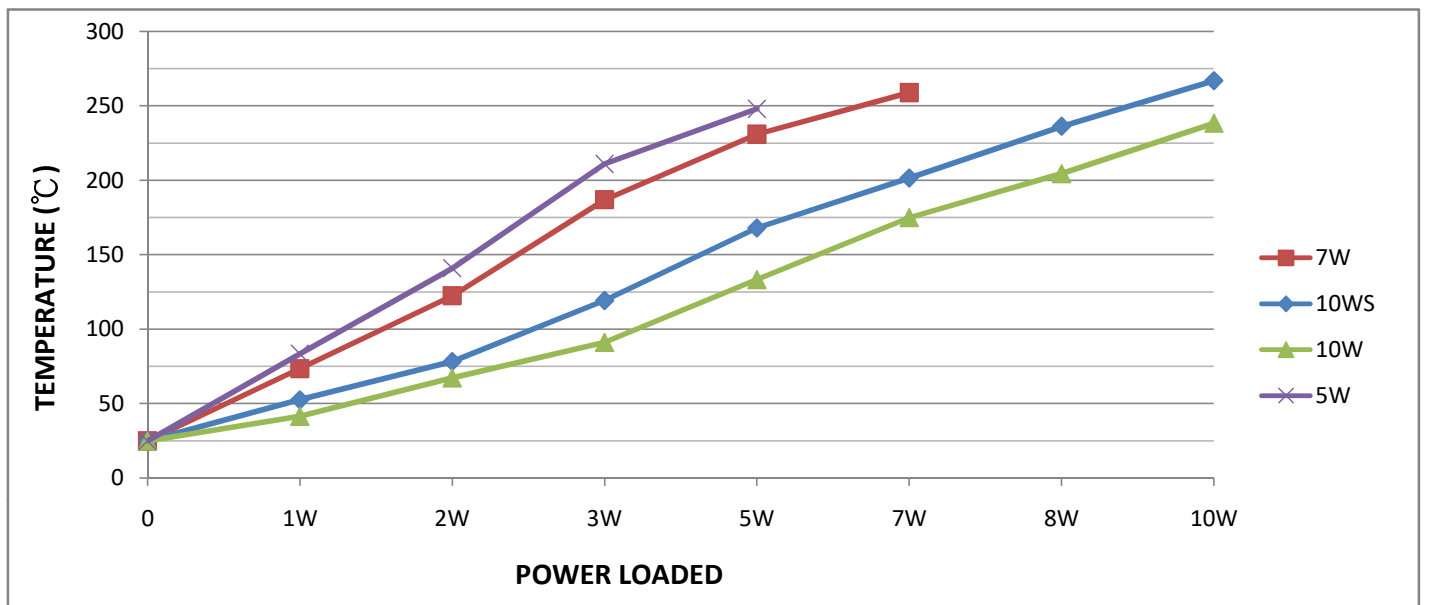
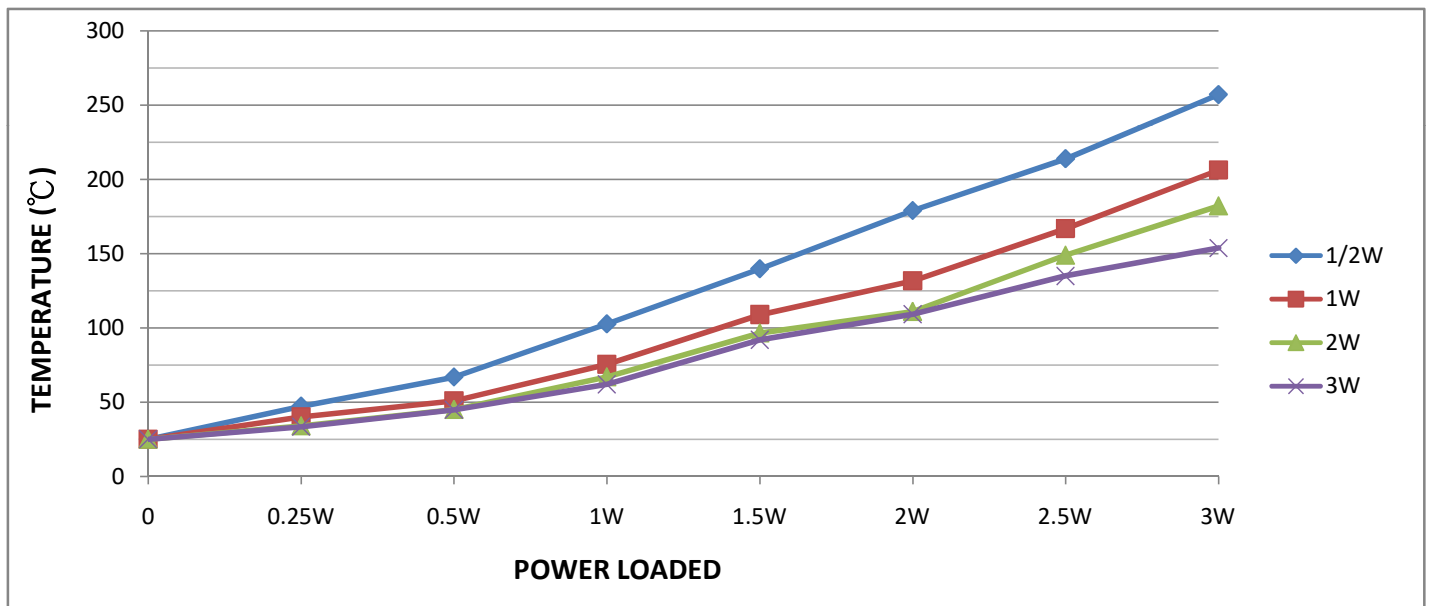
** Consult factory for resistance not included in the column

*** Resistance shown with color code from 1/2W~7WS, wattage 7W~10W shown with stamping.

DERATING CURVE



SURFACE TEMPERATURE



CHARACTERISTIC

TEST	TEST METHOD	APPRAISE
Temperature Coefficient	IEC 60115-1 4.8 -55°C~155°C	±100ppm ~1000pm
Load Life (1000 hours)	IEC 60115-1 4.25 70±2°C at RCWV for 1000 hours (1.5 Hr. on , 0.5 Hr. off)	<±5%+0.05 Ω
Shorttime Overload	IEC 60115-1 4.13 10 times rated power for 5 sec.	<±2%+0.05 Ω
Temperature Cycling	IEC 60115-1 4.19 -55°C → room temp. → +155°C → room temp. (5 cycles)	By type
Moisture Resistance	IEC 60115-1 4.24 40±2°C , 90-95% RH for 56 days , with 0.1 times RCWV	<±5%+0.05 Ω
Solderability	IEC 60115-1 4.17 235±5°C for 3±0.5 sec.	95% min. coverage
Delectric withstanding volt.	IEC 60115-1 4.7 in V-block for 60 sec., test voltage 1/2w~1w=300V, 2w~10w=400V	no electrical breakdown
Effect of Soldering	IEC 60115-1 4.18 260±3°C for 10±1 sec. immersed to point 3±0.5mm from the body	<±2%+0.05 Ω

Note : RCWV (Rated Continuous Working Voltage) = $\sqrt{\text{power rating} * \text{resistance}}$ or max. working voltage listed above

HOW TO ORDER :

SERIES	WATTAGE	RESISTANCE	TOLERANCE	PACKAGE
KNP	1/2W	0R1	5%	T
	1WS	1R	1%	R
	:	:		B
	10WS	100R		MB , F , FK
	10W			

PACKAGE STANDARD PACKAGE QUANTITY :

TYPE	T=TAPING BOX	R=TAPING REEL	B=BULK	FORMING
1/2W / 1WS	2000	2500	500 pcs/bag , 5kpcs/box	By request
1W / 2WS	1000	2000	500 pcs/bag , 2kpcs/box	By request
2W / 3WS	1000	1000	500 pcs/bag , 1kpcs/box	By request
3W / 5WS	500	1000	500 pcs/bag , 1kpcs/box	By request
5W / 7WS	250	500	By request	By request
7W			40 pcs/plastic plate , 600 pcs/box	By request
8W / 10WS			40 pcs/plastic plate , 600 pcs/box	By request
10W			40 pcs/plastic plate , 600 pcs/box	By request