

# Wire-Wound Fixed Resistors

## Performance Specification

Temperature Coefficient	<20Ω: ±400PPM/°C; ≥20Ω: ±300PPM/°C
Short Time Overload	±(2.0% + 0.05Ω)Max, with no evidence of mechanical damage.
Dielectric Withstanding Voltage	No evidence of flashover, mechanical damage, arcing or insulation breakdown.
Pulse Overload	±(5.0% + 0.05Ω)Max, with no evidence of mechanical damage.
Terminal Strength	No evidence of mechanical damage.
Resistance to Soldering Heat	±(1.0% + 0.05Ω)Max, with no evidence of mechanical damage.
Solderability	Min. 95% coverage.
Temperature Cycling	±(2.0% + 0.05Ω)Max, with no evidence of mechanical damage.
Load Life in Humidity	±(5.0% + 0.05Ω)Max, with no evidence of mechanical damage.
Load Life	±(5.0% + 0.05Ω)Max, with no evidence of mechanical damage.
Non-Flame	No evidence of flaming or arcing.
Surge Immunity (IEC 61000-4-5)	±(5.0% + 0.05Ω)Max,


## Ordering Procedure: Ex.: KNP 1W,+/-5%, 100Ω, T/B-1000

**K N P 0 1 W J 0 1 0 1 A 1 0**

**Type:**

KNP = KNP  
KNS = KNS  
KNH = KNH

**Feature:**

0 = Standard  
I = Non-Inductive  
U = UL Approved   
S = Special / Customized  
(For KNP Type only)

**Wattage:**

Normal  
W2 = 1/2W  
1W = 1W  
.. ..  
9W = 9W  
AW = 10W  
.. ..  
A0 = 100W  
  
Small  
1S = 1W-S  
.. ..  
9S = 9W-S  
AS = 10W-S

Extra Small  
1U = 1W-SS  
2U = 2W-SS  
3U = 3W-SS  
4U = 4W-SS  
AU = 10W-SS

**Tolerance:**

F = ±1%  
G = ±2%  
J = ±5%  
K = ±10%

**Resistance Value:**

- E-24 series:  
1<sup>st</sup> digit is "0"  
2<sup>nd</sup> & 3<sup>rd</sup> digits are the significant figures of the resistance  
4<sup>th</sup> indicates the number of zeros:  
"J" ~ 0.1, "K" ~ 0.01  
**Ex.:** 4.7Ω ~ 47J, 4.7KΩ ~ 472
- E-96 series:  
1<sup>st</sup> to 3<sup>rd</sup> digits are the significant figures of the resistance and the 4<sup>th</sup> digit indicates the number of zeros.  
**Ex.** 1.33K = 1331

**Packing Type:**

A = Tape/Box  
T = Tape/Reel  
B = Bulk/Box

**Packing Qty:**

1 = 1,000 pcs.  
2 = 2,000 pcs.  
A = 500 pcs.  
B = 2,500 pcs.(for T/R)  
0 = Bulk/Box


**Additional Information:**

(for KNP,KNS,KNH,KNHA Type B/B pack only)  
0 = NIL

(for KNP Type only)  
0 = PT-52mm, PT-26mm  
8 = PT-58mm  
9 = PT-64mm  
C = PT-73mm

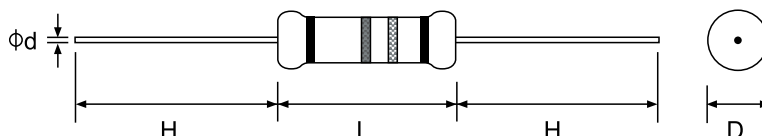
## Wire-Wound Fixed Resistors

### Features

- Color coating is “Green”
- Non-inductive type available
- Excellent flame resistance
- Too low or too high ohmic value can be supplied on a case to case basis
- Special Fusing Wire-Wound Resistors can be supplied on a case to case basis
- Special UL approved items available (UL1412) 



Standard : 2% ,5% ,10% -- E-24 series  
1% -- E-96 series




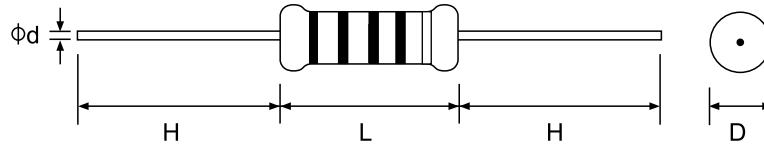
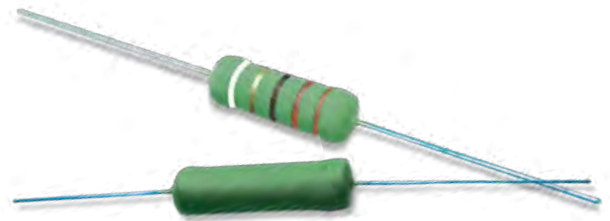
Part No.	Style	Power Rating at 70°C	Dimension (mm)					Low Resistance Range	Standard Resistance Range	High Resistance Range
			D±1	L±1	H±3	d±0.05	PT			
<b>Normal Size</b>										
KNP0W2	KNP 50	1/2W (0.50W)	3.5	10.0	28	0.54	52	0.06Ω~9.9Ω	10Ω~39Ω	40Ω~560Ω
KNP01W	KNP 100	1W	5.0	12.0	25	0.70	52	0.10Ω~9.9Ω	10Ω~50Ω	51Ω~1KΩ
KNP02W	KNP 200	2W	5.5	16.0	28	0.70	64	0.15Ω~9.9Ω	10Ω~120Ω	121Ω~2KΩ
KNP03W	KNP 300	3W	6.5	17.5	28	0.75	64	0.25Ω~9.9Ω	10Ω~200Ω	201Ω~3KΩ
KNP05W	KNP 500	5W	8.5	25	38	0.75	B/B	0.50Ω~9.9Ω	10Ω~470Ω	471Ω~5KΩ
KNP07W	KNP 700	7W	8.5	30	38	0.75	B/B	0.65Ω~9.9Ω	10Ω~470Ω	471Ω~6KΩ
KNP08W	KNP 800	8W	8.5	40	38	0.75	B/B	1.0Ω~9.9Ω	10Ω~1.5KΩ	1.6KΩ~10KΩ
KNP09W	KNP 900	9W	8.5	53	38	0.75	B/B	1.0Ω~9.9Ω	10Ω~1.5KΩ	1.6KΩ~15KΩ
<b>Small Size</b>										
KNP01S	KNP 100-S	1W	3.5	10.0	28	0.54	52	0.06Ω~9.9Ω	10Ω~39Ω	40Ω~560Ω
KNP02S	KNP 200-S	2W	5.0	12.0	25	0.70	52	0.10Ω~9.9Ω	10Ω~50Ω	51Ω~1KΩ
KNP03S	KNP 300-S	3W	5.5	16.0	28	0.70	64	0.15Ω~9.9Ω	10Ω~120Ω	121Ω~2KΩ
KNP05S	KNP 500-S	5W	6.5	17.5	28	0.75	64	0.25Ω~9.9Ω	10Ω~200Ω	201Ω~3KΩ
KNP07S	KNP 700-S	7W	8.5	25	38	0.75	B/B	0.50Ω~9.9Ω	10Ω~470Ω	471Ω~5KΩ
KNP08S	KNP 800-S	8W	8.5	30	38	0.75	B/B	0.65Ω~9.9Ω	10Ω~470Ω	471Ω~6KΩ
KNP09S	KNP 900-S	9W	8.5	40	38	0.75	B/B	1.0Ω~9.9Ω	10Ω~1.5KΩ	1.6KΩ~10KΩ
KNP0AS	KNP 1000-S	10W	8.5	53	38	0.75	B/B	1.0Ω~9.9Ω	10Ω~1.5KΩ	1.6KΩ~15KΩ
<b>Extra Size</b>										
KNP01U	KNP 100-SS	1W	3.0	9.0	28	0.54	52	0.10Ω~9.9Ω	10Ω~39Ω	40Ω~180Ω
KNP02U	KNP 200-SS	2W	3.5	10.0	28	0.54	52	0.10Ω~9.9Ω	10Ω~39Ω	40Ω~220Ω
KNP03U	KNP 300-SS	3W	5.5	13.5	28	0.70	64	0.20Ω~9.9Ω	10Ω~50Ω	51Ω~620Ω
KNP04U	KNP 400-SS	4W	5.5	16.0	28	0.70	64	0.20Ω~9.9Ω	10Ω~120Ω	121Ω~750Ω
KNP0AU	KNP 1000-SS	10W	8.5	40	38	0.75	B/B	1.0Ω~9.9Ω	10Ω~1.5KΩ	1.6KΩ~5KΩ

Note: For KNP Series Max. Working Voltage: 500V  
 Max. Overload Voltage: 1,000V  
 Dielectric Withstanding Voltage : Demension ≤ 3.5 x 10 : 350V  
 > 3.5 x 10 : 500V

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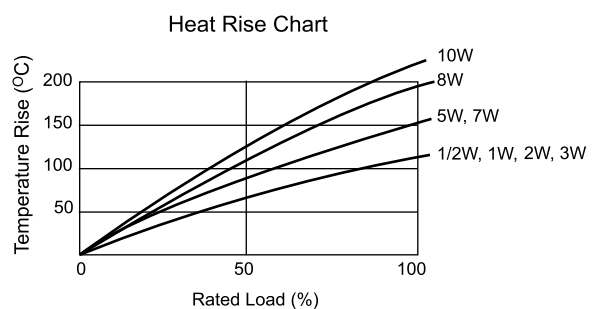
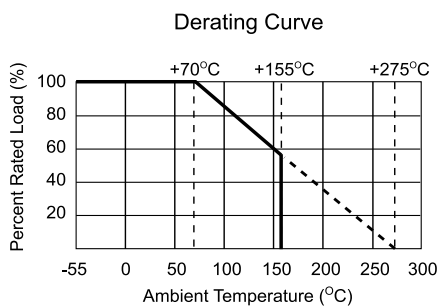


Standard : 2% ,5% ,10% -- E-24 series  
1% -- E-96 series

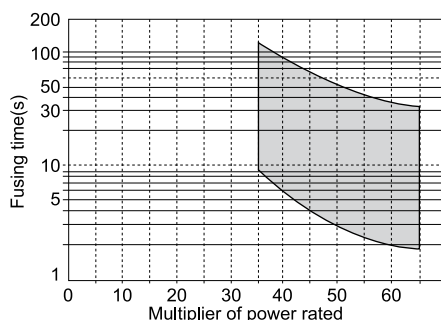
Part No.	Style	Power Rating at 70°C	Dimension (mm)					Standard Resistance Range
			D±1	L±1	H±3	d±0.05	PT	
<b>Normal Size</b>								
KNPU1W	KNPU100	1W	5.0	12.0	25	0.70	52	4.7Ω ~ 47Ω
KNPU2W	KNPU200	2W	5.5	16.0	28	0.70	64	4.7Ω ~ 47Ω
KNPU3W	KNPU300	3W	6.5	17.5	28	0.75	64	4.7Ω ~ 47Ω
KNPU5W	KNPU500	5W	8.0	20.0	38	0.75	B/B	4.7Ω ~ 47Ω
KNPU7W	KNPU700	7W	8.5	25.0	38	0.75	B/B	4.7Ω ~ 47Ω

Note: Surge spec available on a case to case basis.

Part No.	Style	Power Rating at 70°C	Dimension (mm)					Resistance Range	Standard Packing Qty	Max Surge Voltage
			D(Max)	L(Max)	H±3	d±0.05	PT			
<b>Small Size</b>										
KNPU1U	KNPU1W-SS	1W	3.0	8.5	28.0	0.54	52	10Ω	1,000	1.2KV
KNPU1S	KNPU1W-S	1W	4.0	9.0	28.0	0.60	52	4.7Ω ~ 47Ω	1,000	Depends on Value
KNPU1S	KNPU1W-S	1W	4.0	10.0	28.0	0.75	52	10Ω	1,000	1.6KV
KNPU2S	KNPU2W-S	2W	5.0	12.0	28.0	0.70	52	4.7Ω ~ 47Ω	1,000	Depends on Value



Fusing Graph For UL Approved

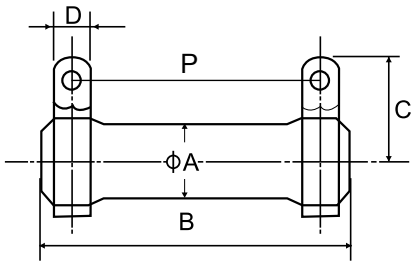


Note: For KNP Series Max. Working Voltage: 500V  
 Max. Overload Voltage: 1,000V  
 Dielectric Withstanding Voltage : Demension ≤ 3.5 x 10 : 350V  
 > 3.5 x 10 : 500V

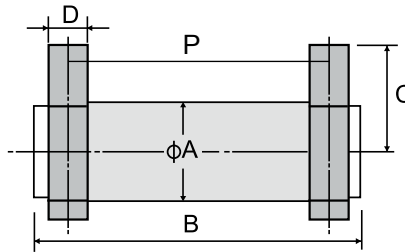
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## KNH, KNHA Type

KNH Type

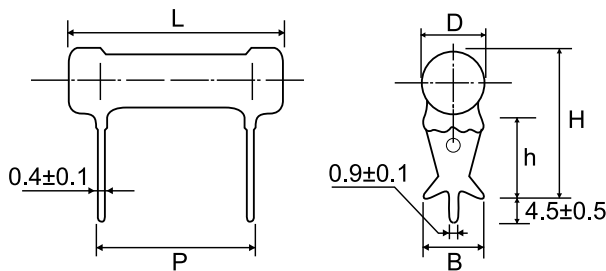


KNHA Type



Part No.	Style	Power Rating at 70°C	Dimension (mm)					Resistance Range
			A±1.5	B±1.5	C±3	D±0.5	P±5	
KNH020	KNH 20W	20W	19	50	19	4.5	40	0.4Ω ~ 10KΩ
KNH030	KNH 30W	30W	19	75	19	4.5	65	0.5Ω ~ 15KΩ
KNH040	KNH 40W	40W	19	90	19	4.5	80	0.6Ω ~ 20KΩ
KNH050	KNH 50W	50W	28	75	31	8	65	3Ω ~ 25KΩ
KNH060	KNH 60W	60W	28	90	31	8	80	3Ω ~ 30KΩ
KNH080	KNH 80W	80W	28	115	31	8	100	3Ω ~ 40KΩ
KNH100	KNH 100W	100W	28	140	31	8	130	3Ω ~ 50KΩ
KNHA25	KNHA 25W	25W	21	41	24	5	30	0.4Ω ~ 10KΩ
KNHA30	KNHA 30W	30W	21	42	24	5	30	0.4Ω ~ 10KΩ

## KNS Type



Part No.	Style	Power Rating at 70°C	Dimension (mm)						Resistance Range
			D Max	L±1.5	P±0.5	H±1	h±1	B±0.5	
KNS02W	KNS 200	2W	8	19	8	19	12	4.5	0.1Ω ~ 50Ω
KNS03W	KNS 300	3W	8	21	10	19	13	4.5	0.5Ω ~ 50Ω
KNS05W	KNS 500	5W	10	26	15	21.5	13	6.5	0.5Ω ~ 100Ω
KNS07W	KNS 700	7W	10	31	20	21.5	13	6.5	1Ω ~ 1KΩ
KNS08W	KNS 800	8W	10	41	30	21.5	13	6.5	1Ω ~ 1.5KΩ
KNS0AW	KNS 1000	10W	10	54	43	21.5	13	6.5	1Ω ~ 2KΩ