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# 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

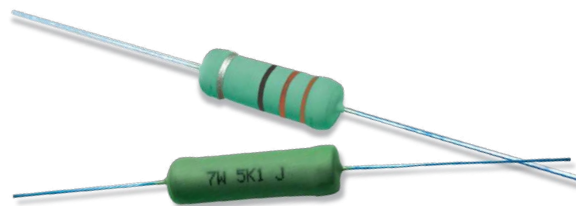
K	N	P	0	1	W	J	0	1	0	1	A	1	0	
<b>Type:</b> KNP = KNP KNS = KNS KNH = KNH			<b>Wattage:</b> Normal W2 = 1/2W 1W = 1W .. .. 9W = 9W AW = 10W .. .. A0 = 100W  Small 1S = 1W-S .. .. 9S = 9W-S AS = 10W-S  Extra Small 1U = 1W-SS 2U = 2W-SS 3U = 3W-SS 4U = 4W-SS AU = 10W-SS			<b>Resistance Value:</b> <ul style="list-style-type: none"> <li>E-24 series:                      1<sup>st</sup> digit is "0"                      2<sup>nd</sup> &amp; 3<sup>rd</sup> digits are 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</li> <li>E-96 series:                      1<sup>st</sup> to 3<sup>rd</sup> digits are significant figures of the resistance and the 4<sup>th</sup> digit indicates the number of zeros.                      Ex.: 1.33KΩ = 1331</li> </ul>			<b>Packing Type:</b> A = Tape/Box T = Tape/Reel B = Bulk/Box			<b>Packing Qty:</b> 1 = 1,000 pcs. 2 = 2,000 pcs. A = 500 pcs. B = 2,500 pcs. (for T/R) 0 = Bulk/Box		
<b>Feature:</b> 0 = Standard I = Non-Inductive U = UL Approved S = Special / Customized (For KNP Type only) A = Anti-Surge			<b>Tolerance:</b> F = ±1% G = ±2% J = ±5% K = ±10%			<b>Additional Information:</b> (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								



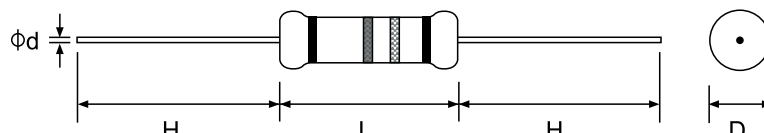
## Wire-Wound Fixed Resistors

### 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



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

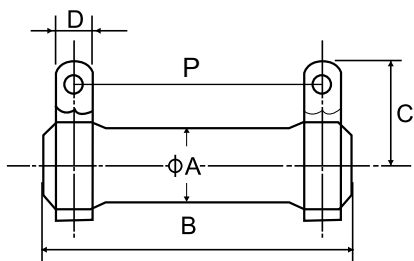
Note: For KNP Series Max. Working Voltage: 500V  
 Max. Overload Voltage: 1,000V  
 Dielectric Withstanding Voltage : Dimension ≤ 3.5 x 10 : 350V  
 > 3.5 x 10 : 500V



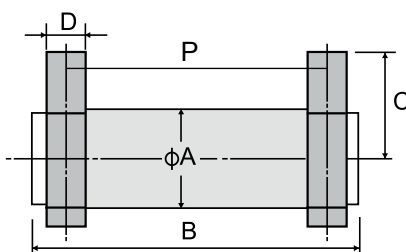
## Wire-Wound Fixed Resistors

### KNH, KNHA Type

KNH Type

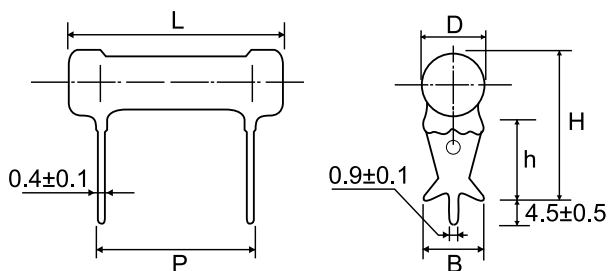


KNHA Type



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