



# General Resistors

## Vitreous Enamel Coated Wirewound Resistors - KNP-VE Series / 被釉绕线电阻

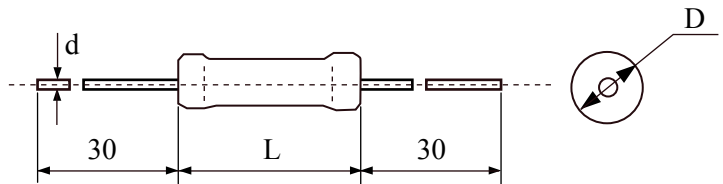
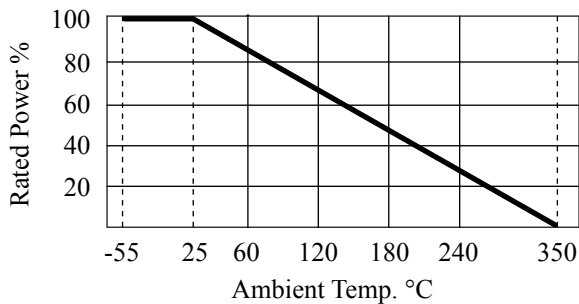
Wirewound resistor construction consists of a measured length of resistance wire (metal alloy) wound on a core (usually a ceramic). The element assembly is then protected by a coating or enclosure of insulating material (such as: vitreous enamel, silicone, cement, epoxy, etc.). Wirewound Resistors are typically used where large power dissipation is required and where AC performance is relatively unimportant. Token provides wirewound resistors (KNP-VE).



### ► Wirewound Resistors Technical Specifications

Type	Rated Watts (W)	Resistance Range ( $\Omega$ )	Limiting Voltage (V)	Tolerance	Temperature Coefficient (PPM/ $^{\circ}$ C)	Dimensions (mm) (Max)		
						L	$\Phi$ D	$\Phi$ d
KNP-VE-2.5	2.5	1 ~ 1K	100	$\pm 5\%$ $\pm 10\%$	$\pm 250$ $\pm 400$	12.7	5.6	0.8
KNP-VE-3	3	1 ~ 1K	120			14.0	7.0	
KNP-VE-5	5	1 ~ 3.6K	160			23.0	7.0	
KNP-VE-6	6	1 ~ 6.8K	200			22.2	8.0	
KNP-VE-8	8	1 ~ 20K	400			33.9	8.0	
KNP-VE-9	9	1 ~ 27K	500			38.1	8.0	1.0
KNP-VE-12	12	1 ~ 39K	750			53.5	8.0	

Power Derating Curve



### ► Wirewound Resistors Performance

Test Items	Condition	Specifications
Insulation Resistance	500V	20M $\Omega$
Short Time Overload	2.5 times of rated voltage 5 sec.	$\Delta R \leq \pm(2\%R + 0.05\Omega)$
Rated Load	Rated wattage 30 min.	$\Delta R \leq \pm(1\%R + 0.05\Omega)$
Dielectric Withstanding Voltage	500V AC 1 min	$\Delta R \leq \pm(1\%R + 0.05\Omega)$
Temp. Cycle	-20 $^{\circ}$ C ~ 85 $^{\circ}$ C 5 cycles	$\Delta R \leq \pm(1\%R + 0.05\Omega)$
Load Life	70 $^{\circ}$ C on ~ off cycle 1000 hrs.	$\Delta R \leq \pm(5\%R + 0.05\Omega)$
Moisture-Proof Load Life	40 $^{\circ}$ C 95% RH on~off cycle 500 hrs.	$\Delta R \leq \pm(3\%R + 0.05\Omega)$
Soldering After Resistance	350 $^{\circ}$ C for 3 sec	$\Delta R \leq \pm(0.5\%R + 0.05\Omega)$
Incombustibility	16 times of rated wattage for 5 min.	Not flamed





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## ► Wirewound Resistors - KNP-VE How to Order

KNP-VE - 3W 100R J P

①                      ②                      ③                      ④                      ⑤

① Product Type

② Power Rating

③ Resistance

Code	Resistance
1R	1Ω
100R	100Ω
1KR	1000Ω

④ Resistance Tolerance

Code	Resistance Tolerance
J	±5%
K	±10%

⑤ Packaging

Code	Packaging
TB	Taping Box
P	Bulk