Wire Wound Resistors

FLAME-PROOF TYPE

Normal & Miniature Style [KNP Series]

INTRODUCTION

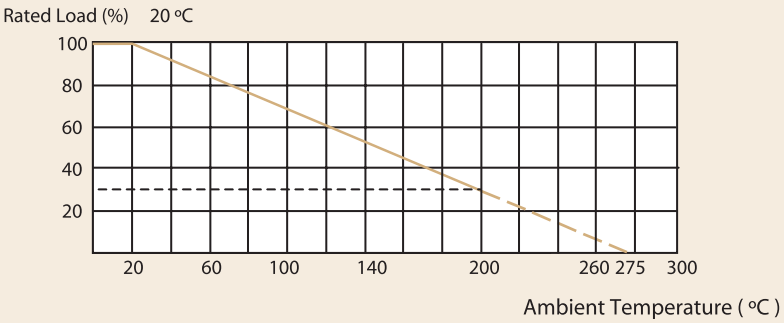
- The resistor is fabricated using a suitable fiberglass or ceramic core with the resistance wire securely crimped to the terminals
- Small in size comparatively than other kind resistor
- Electrical and Mectanical stability and high reliability
- The KNP/NKN series are coated with layers of green color flame-proof lacquer. The resistors meet overload tests in accordance with UL specification #1412 without producing a fire hazard

GENERAL PURPOSE

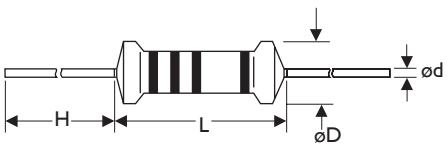
Power Rating : 1/4W, 1/2W, 1W, 2W, 3W, 5W, 7W
Resistance Tolerance : ±1%, ±5%
FlameProof Silicone Coating : UL94V-0
Green body color
Stable performance in diverse environments
High safety standard

POWER DERATING CURVE

For resistors operated in ambient temperatures above 20°C , power rating must be derated in accordance with the curve below.



DIMENSIONS



Unit : mm

STYLE		DIMENSION			
Normal	**Miniature**	**L**	**øD**	**H**	**ød**
KNP-25	KNP50S	6.3±0.5	2.5±0.3	28±2.0	0.6±0.05
KNP-50	KNP1WS	9.0±0.5	3.3±0.3	26±2.0	0.6±0.05
KNP100	KNP2WS	11.5±1.0	4.5±0.5	35±2.0	0.8±0.05
KNP200	KNP3WS	15.5±1.0	5.0±0.5	33±2.0	0.8±0.05
KNP300	KNP5WS	17.5±1.0	6.5±1.0	32±2.0	0.8±0.05
KNP500	KNP7WS	24.5±1.0	8.5±1.0	39±2.0	0.8±0.05

Note :

ELECTRICAL CHARACTERISTICS

STYLE	KNP-25	KNP50S	KNP-50	KNP1WS	KNP100	KNP2WS	KNP200	KNP3WS	KNP300	KNP5WS	KNP500	KNP7WS
Power Rating	1/4W	1/2W		1W		2W		3W		5W		7W
Operating Temp. Range	-55°C TO +155°C											
Dielectric Withstanding Voltage	300V	300V	300V	300V	400V	400V	400V	400V	400V	400V	400V	400V
Value Range ±5%	0.1Ω-47Ω				0.1Ω-100Ω		0.1Ω-300Ω		0.1Ω-560Ω			0.1Ω-1KΩ
Temperature Coefficient	±400ppm/°C											

* Resistance range for standard resistance, below or over this resistance on request.

ENVIRONMENTAL CHARACTERISTICS

PERFORMANCE TEST	TEST METHOD		APPRAISE
Terminal Strength	JIS-C-5202 6.1	Direct load for 10 Sec. in the Direction of the Terminal Leads	≥2.5kg (24.5N)
Resistance to Soldering Heat	JIS-C-5202 6.4	350°C ± 10°C for 3 ± 0.5 Seconds	±1.0%+0.05Ω
Solderability	JIS-C-5202 6.5	235°C ± 5°C for 5 ± 0.5 Seconds	95% Min. Coverage
Resistance to Solvent	JIS-C-5202 6.9	IPA for 1 Min. with Ultrasonic	No Deterioration of Coatings and Markings
Temperature Cycling	JIS-C-5202 7.4	-55°C→Room Temp.→+155°C→Room Temp. for 5 Cycles	±1.0%+0.05Ω
Humidity	JIS-C-5202 7.5	40±2°C, 90~95% RH for 1,000 Hrs.	±3.0%+0.05Ω
Load Life in Humidity	JIS-C-5202 7.9	40±2°C, 90~95% RH at RCWV for 1,000 Hrs. (1.5 Hrs. on , 0.5 Hrs. off)	±5.0%+0.05Ω
Load Life	JIS-C-5202 7.10	70°C at RCWV for 1,000 Hrs. (1.5 Hrs. on, 0.5 Hrs. off)	±5.0%+0.05Ω
Overload Flame Retardant	JIS-C-5202 7.12	4 Times RCWV for 1 minute	No evidence of flaming or arcing

* Rated Continuous Working Voltage (RCWV)= $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$