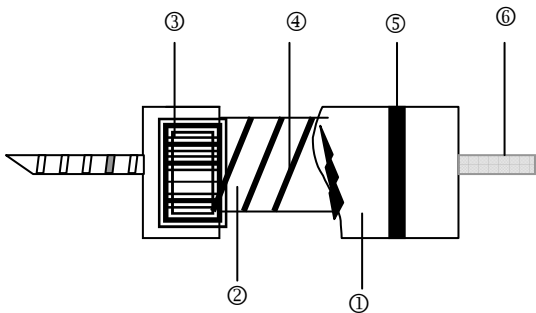


Wire Wound Leded Resistors

Scope

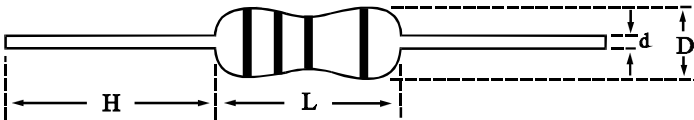
This KNP type standard specification is for use in consumer electronics computer, telecommunication equipments, etc

Construction



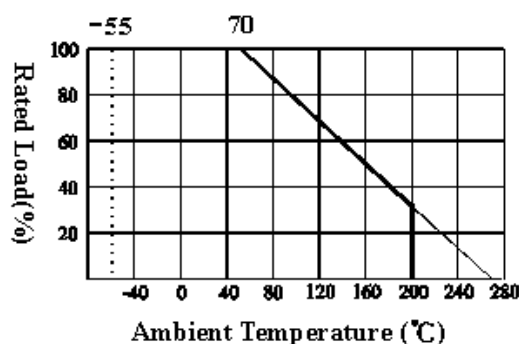
①	Non-flame Paint With Sol Vent-proof	④	Copper-Nickel Alloy Wire Wound Film
②	Ceramic Rod	⑤	Marking
③	End Cap	⑥	Lead Wire

Dimensions



Type	L	D	H	d
0932	9.0±0.5	3.2±0.5	26±2.0	0.53~0.68
1145	11.5±1.0	4.5±0.5	35±2.0	0.73~0.80
1550	15.5±1.0	5.0±0.5	32±2.0	0.73~0.80
1760	17.5±1.0	6.0±0.5	32±2.0	0.73~0.80
2480	24.5±1.0	8.0±0.5	38±3.0	0.73~0.80

Derating Curve



Part Numbering

KNP	0932	J	A	H	-	1000
Product Type	Dimensions (LxD)	Resistance Tolerance	Packaging Code	TCR (PPM/°C)	Power Rating	Resistance
	0932: 9.0x3.2 1145: 11.5x4.5 1550: 15.5x5.0 1760: 17.5x6.0 2480: 24.5x8.0	F: $\pm 1\%$ J: $\pm 5\%$	A: Ammo B: Bulk	H: ± 400	: Standard E: 7W D: 5W R: 3W S: 2W T: 1W U: 1/2W	R100: 0.1Ω 0010: 1Ω 0100: 10Ω 1000: 100Ω

Standard Electrical Specifications

Item Type	Power Rating at 70°C	Operating Temp. Range	Dielectric Withstanding Voltage	Resistance Range		TCR (\pm PPM/°C)
				$\pm 1\%$	$\pm 5\%$	
0932	1/2W	-55 ~ +200°C	300V	-	0.1Ω~100Ω	± 400
1145	1W		300V	0.1Ω~10Ω	0.1Ω~100Ω	
1550	2W		400V	-	0.1Ω~100Ω	
1760	3W		400V	-	0.1Ω~100Ω	
2480	5W		400V	-	0.1Ω~100Ω	

High Power Rating Electrical Specifications

Item Type	Power Rating at 70°C	Operating Temp. Range	Dielectric Withstanding Voltage	Resistance Range		TCR (\pm PPM/°C)
				$\pm 1\%$	$\pm 5\%$	
0932	1W	-55 ~ +200°C	300V	-	0.1Ω~100Ω	± 400
1145	2W		350V	0.1Ω~10Ω	0.1Ω~100Ω	
1550	3W		400V	0.1Ω~20Ω	0.1Ω~100Ω	
1760	5W		400V	-	0.1Ω~100Ω	
2480	7W		400V	-	0.1Ω~50Ω	

Resistor body color : Grey or Pink are available

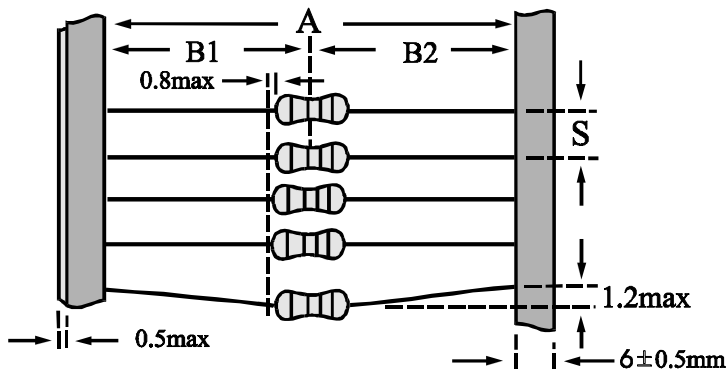
Environmental Characteristics

Item	Specification	Test Method
Short Time Overload	$\pm(2\%+0.05\Omega)$	JIS-C-5201-1 5.5 RCWV*2.5 or Max Overloading Voltage · 5 seconds
Temperature Coefficient	By Type	Resistance value at room temperature and room temperature+100°C
Dielectric Withstanding Voltage	By Type	JIS-C-5201-1 5.7 In V-Block for 1 minute
Insulation Resistance	$> 100M\Omega$	JIS-C-5201-1 5.6 In V-Block for 1 minute
Load Life	$\pm(5\%+0.05\Omega)$	JIS-C5201-1 7.10 RCWV · 70°C · RCWV for1000hrs (1.5hrs.on · 0.5hrs.off)
Humidity (Steady State)	$\pm(5\%+0.05\Omega)$	JIS-C5201-1 7.9 40±2°C , 90~95%RH,RCWV for1000hrs (1.5hrs.on · 0.5hrs.off)
Solderability	95% Min. Coverage	JIS-C5201-1 6.5 260°C±5°C, 2±0.5 (sec)
Terminal Strength	Tensile: $\geq 2.5\text{kg}$	Direct Load for 10 sec. In the direction off the terminal leads.

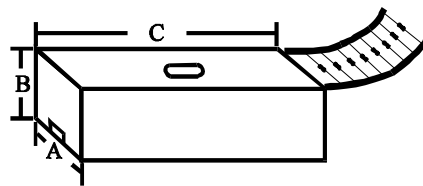
■ Storage Temperature :15~28°C; Humidity <80%RH

Taping/Packing Specifications

Packing Methods



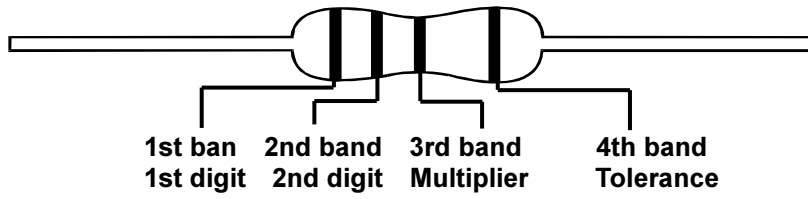
Ammo Packing



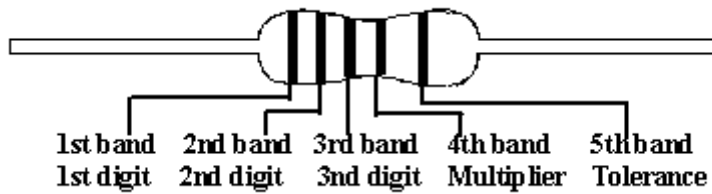
Unit: mm

Packaging Type	Packing Methods			Ammo Packing			
	A	B1-B2	S	A	B	C	Qty
0932	52.5±1.5	1.2	5	73	57	255	1,000
1145	73.0±1.5	1.5	5	92	83	267	1,000
1550	73.0±1.5	1.5	10	92	100	267	1,000
1760	73.0±1.5	1.5	10	92	83	267	500
2480	73.0±1.5	1.5	10	92	83	267	250

■ Marking & Resistance Tolerance



±5.0%	E-24	1.0	1.1	1.2	1.3	1.5	1.6	1.8	2.0	2.2	2.4	2.7	3.0	3.3	3.6	3.9	4.3	4.7	5.1	5.6	6.2	6.8	7.5	8.2	9.1
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±1.0%	E-96	1.00	1.02	1.05	1.07	1.10	1.13	1.15	1.18	1.21	1.24	1.27	1.30	1.33	1.37	1.40	1.43	1.47	1.50	1.54	1.58	1.62	1.65	1.69	1.74
		1.78	1.82	1.87	1.91	1.96	2.00	2.05	2.10	2.15	2.21	2.26	2.32	2.37	2.43	2.49	2.55	2.61	2.67	2.74	2.80	2.87	2.94	3.01	3.09
		3.16	3.24	3.32	3.40	3.48	3.57	3.65	3.74	3.83	3.92	4.02	4.12	4.22	4.32	4.42	4.53	4.64	4.75	4.87	4.99	5.11	5.23	5.36	5.49
		5.62	5.76	5.90	6.04	6.19	6.34	6.49	6.65	6.81	6.98	7.15	7.32	7.50	7.68	7.87	8.06	8.25	8.45	8.66	8.87	9.09	9.31	9.53	9.76

Color	Digit	Multiplier	Tolerance	
Without	-	-	-	-
Silver	-	10 ⁻²	-	-
Gold	-	10 ⁻¹	±5.0%	J
Black	0	10 ⁰	-	-
Brown	1	10 ¹	±1.0%	F
Red	2	10 ²	-	-
Orange	3	10 ³	-	-
Yellow	4	10 ⁴	-	-
Green	5	10 ⁵	-	-
Blue	6	10 ⁶	-	-
Violet	7	10 ⁷	-	-
Grey	8	10 ⁸	-	-
White	9	10 ⁹	-	-