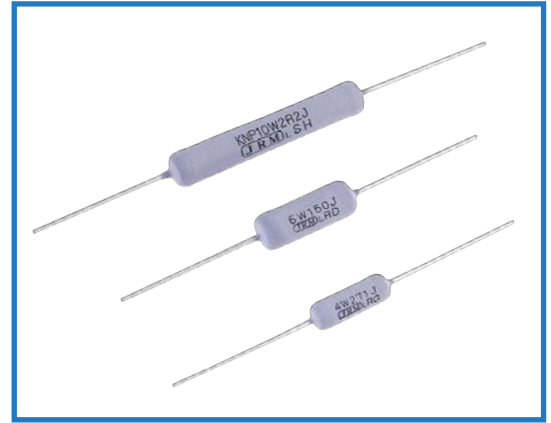


不燃性巻線固定抵抗器  
Non Flammable Wire-Wound Fixed Resistor

KNP series

- プリント基板実装タイプ
- 超小形品
- RoHS対応品
- PCB mounting type
- Ultra Small-sized
- RoHS complied



■電氣的、機械的特性 Electrical and mechanical characteristics

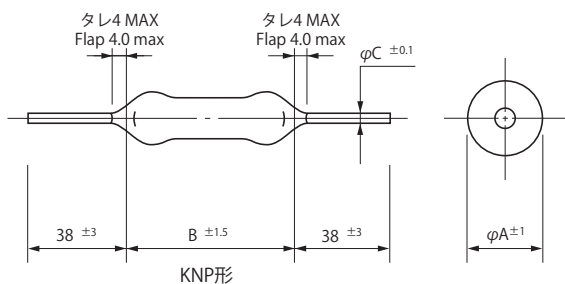
特性 Characteristics	規格値 Standards	試験方法 Test methods												
抵抗値と抵抗値許容差 Resistance and Resistance tolerance	公称抵抗値 Resistance nominal 1Ω ≤ ±5% (J) 1Ω > ±10% (K)													
抵抗温度特性 Temperature coefficient	20Ω ≤ ±260ppm/°C max. (常温 Normal temp.~常温 Normal temp.+ 100°C) 20Ω > ±400ppm/°C max. (常温 Normal temp.~常温 Normal temp.+ 100°C)													
定格負荷 Power rating load	ΔR/R ≤ ± (1%+0.05Ω) 最高表面温度 (Max. surface temp. rise) 350°C max.													
短時間過負荷 Short-time overload	アーク焼損等の異常なきこと No evidence of arc damage etc. ΔR/R ≤ ± (2%+0.05Ω)	定格電力×10倍 5秒間負荷 1000% of rated power load for 5 seconds												
絶縁抵抗 Insulation resistance	20MΩ min.	DC500V												
耐電圧 Dielectric withstanding voltage	機械的損傷及び絶縁破壊なきこと No evidence of mechanical damage or insulation breakdown ΔR/R ≤ ± (0.1%+0.05Ω)	AC800V for one minute												
端子強度 Terminal strength	機械的損傷なきこと No evidence of mechanical damage	<table border="1"> <tr> <td>端子径 (Terminal diameter)</td> <td colspan="2">荷重(Load)</td> <td></td> </tr> <tr> <td>φ0.6</td> <td>φ0.8</td> <td></td> <td></td> </tr> <tr> <td>引張り(Pull)</td> <td>4.9N</td> <td>9.8N</td> <td>30seconds</td> </tr> </table>	端子径 (Terminal diameter)	荷重(Load)			φ0.6	φ0.8			引張り(Pull)	4.9N	9.8N	30seconds
端子径 (Terminal diameter)	荷重(Load)													
φ0.6	φ0.8													
引張り(Pull)	4.9N	9.8N	30seconds											
抵抗体強度 Resistor strength	機械的損傷なきこと No evidence of mechanical damage	<table border="1"> <tr> <td>4W~10W</td> <td>98N</td> <td>10seconds</td> </tr> <tr> <td>1W~3W</td> <td colspan="2">適用外(Not applicable)</td> </tr> </table>	4W~10W	98N	10seconds	1W~3W	適用外(Not applicable)							
4W~10W	98N	10seconds												
1W~3W	適用外(Not applicable)													
耐振性 Vibration	機械的損傷なきこと No evidence of mechanical damage ΔR/R ≤ ± (1%+0.05Ω)	X and Y each direction for 2 hours												
半田耐熱 Soldering heat	機械的損傷及び外観劣化なきこと No evidence of mechanical damage and appearance deterioration ΔR/R ≤ ± (1%+0.05Ω)	350°C for 3 seconds												
半田付け性 Solderability	75%以上新しい半田で覆われること 75% coverage min. with new solder	250°C for 3 seconds												

■耐候的特性 Environmental characteristics

特性 Characteristics	規格値 Standards	試験方法 Test methods
耐熱性 Heat resistance	標印、絶縁被覆に著しい損傷なきこと No deterioration of protective coatings or markings	350±5°C for 2 hours
熱衝撃 Thermal shock	機械的損傷なきこと No evidence of mechanical damage ΔR/R ≤ ± (2%+0.05Ω)	定格負荷30分間 → -40°C 15分間 Power rating load for 30 minutes → -40°C for 15 minutes
耐湿性 (定常状態) Humidity (Steady state)	標印、絶縁被覆に異常なきこと No deterioration of protective coatings or markings ΔR/R ≤ ± (3%+0.05Ω)	成極DC100V 40°C 95%RH for 500 hours
耐久性 (耐湿負荷) Durability (Moisture resistance)	標印、絶縁被覆に異常なきこと No deterioration of protective coatings or markings ΔR/R ≤ ± (3%+0.05Ω)	10%負荷 10% of rated power load 90 minutes ON and 30 minutes OFF 40°C 95%RH for 1000 hours
耐久性 (定格負荷) Durability (Nominal load)	標印、絶縁被覆に異常なきこと No deterioration of protective coatings or markings ΔR/R ≤ ± (5%+0.05Ω)	100%負荷 100% of rated power load 90 minutes ON and 30 minutes OFF 70°C for 1000 hours
難燃性 (過負荷) Flame resistance (Over load)	燃焼しないこと No evidence of flaming or arcing	定格電力の1~16倍 100~1600% of rated power load

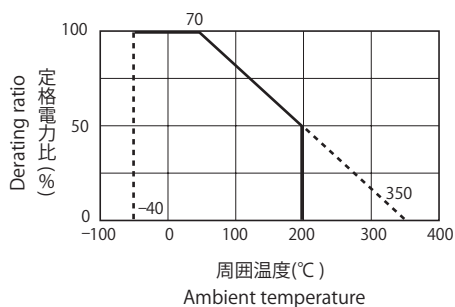
■規格 Standards

●形状・寸法 Configuration (mm)

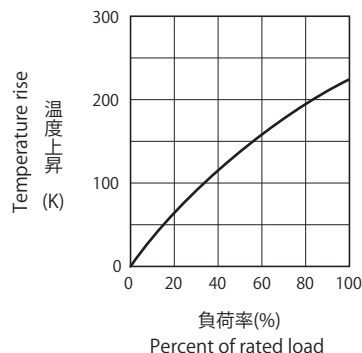


形状 Type	定格電力 (W) Power Rating	寸法 Dimensions (mm)			抵抗値範囲 (Ω) Resistance range
		A	B	C	
KNP 1W	1	2.5	7	0.6	0.1~47
2W	2	3.5	12	0.6	0.1~120
3W	3	5.0	12	0.8	0.1~150
4W	4	7.0	21	0.8	0.18~560
6W	6	9.0	26	0.8	0.33~1k
8W	8	9.0	41	0.8	0.68~2.2k
10W	10	9.0	54	0.8	1~2.7k

●定格電力軽減曲線 Power Derating Curve



●表面温度上昇 Surface Temperature Rise



■標準抵抗値

Standard resistance values JIS-E24 series

■抵抗値許容差

Resistance tolerance

R ≥ 1Ω……±5% (J)

R < 1Ω……±10% (K)

( )内 抵抗値コード Resistance code

KNP 3W (Ω)	0.1	0.12	0.15	0.18	0.22	0.27	0.33	0.39	0.47	0.56	0.68	0.82
KNP 4W (Ω)				0.18	0.22	0.27	0.33	0.39	0.47	0.56	0.68	0.82
KNP 6W (Ω)							0.33	0.39	0.47	0.56	0.68	0.82
(抵抗値コード)	(R10)	(R12)	(R15)	(R18)	(R22)	(R27)	(R33)	(R39)	(R47)	(R56)	(R68)	(R82)

KNP 3W (Ω)												
KNP 4W (Ω)	1.0	1.2	1.5	1.8	2.2	2.7	3.3	3.9	4.7	5.6	6.8	8.2
KNP 6W (Ω)												
(抵抗値コード)	(1R0)	(1R2)	(1R5)	(1R8)	(2R2)	(2R7)	(3R3)	(3R9)	(4R7)	(5R6)	(6R8)	(8R2)

KNP 3W (Ω)												
KNP 4W (Ω)	10	12	15	18	22	27	33	39	47	56	68	82
KNP 6W (Ω)												
(抵抗値コード)	(100)	(120)	(150)	(180)	(220)	(270)	(330)	(390)	(470)	(560)	(680)	(820)

KNP 3W (Ω)	100	120	150									
KNP 4W (Ω)	100	120	150	180	220	270	330	390	470	560		
KNP 6W (Ω)	100	120	150	180	220	270	330	390	470	560	680	820
(抵抗値コード)	(101)	(121)	(151)	(181)	(221)	(271)	(331)	(391)	(471)	(561)	(681)	(821)

※上記の標準抵抗値は、一部在庫をご用意致しておりますのでお問い合わせ下さい。  
The above standard resistance values can be in stock, please contact us.

■品番コード Explanation of Part Number

