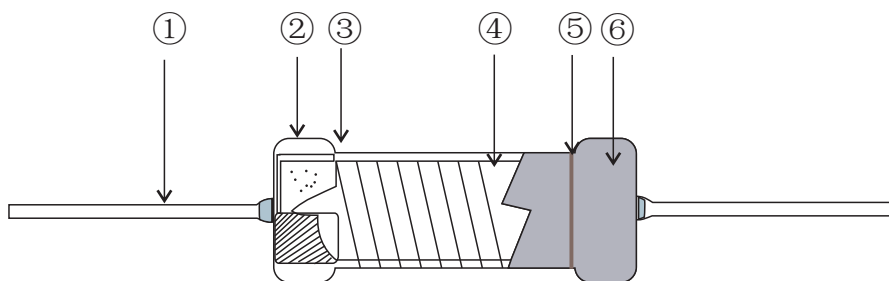


KNP 线绕电阻器 WIRE WOUND RESISTOR



本体颜色: Body Color
标准品: Standard (Gray 灰色)
标示: Marking
色环: Color Code (1/4W-5W)
文字: Alphanumeric (6W-40W)
(根据客户要求提供相应标识)
(According to the customer request to provide corresponding identification)

● 结构图 Construction



1	2	3	4	5	6
端子线	线帽	瓷棒	绕线	标示	绝缘涂料
lead wire	cap	ceramic base	wire wound	marking or color code	insulation coat

● 特性 Feature

I 表面涂不燃性涂料，具不燃与绝缘之安全特性 (UL94V-0)

Flameproof and insulating coating designed to assure safe usage by special non-flammable silicon-base. (Equivalent to UL94V-0)

II 耐热性好、温度系数小、噪声低、负荷功率大

Good heat-durability, low temperature coefficient, low noise, high overload power

III 长期稳定性强

Stable long service life

IV 产品符合欧盟RoHS要求

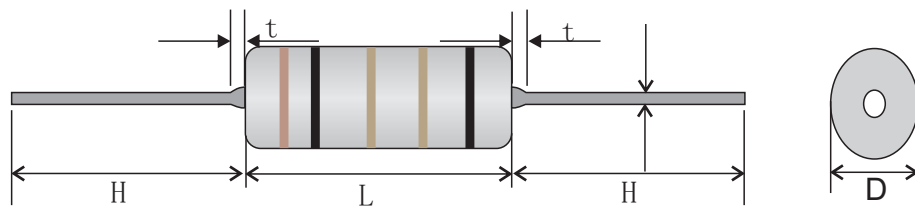
Products meet Eu-RoHS.

● 参考规格 Reference Standards

JIS C 5201-1

KNP 线绕电阻器 WIRE WOUND RESISTOR

尺寸、功率、阻值范围与耐电压 Dimensions And Resistance etc



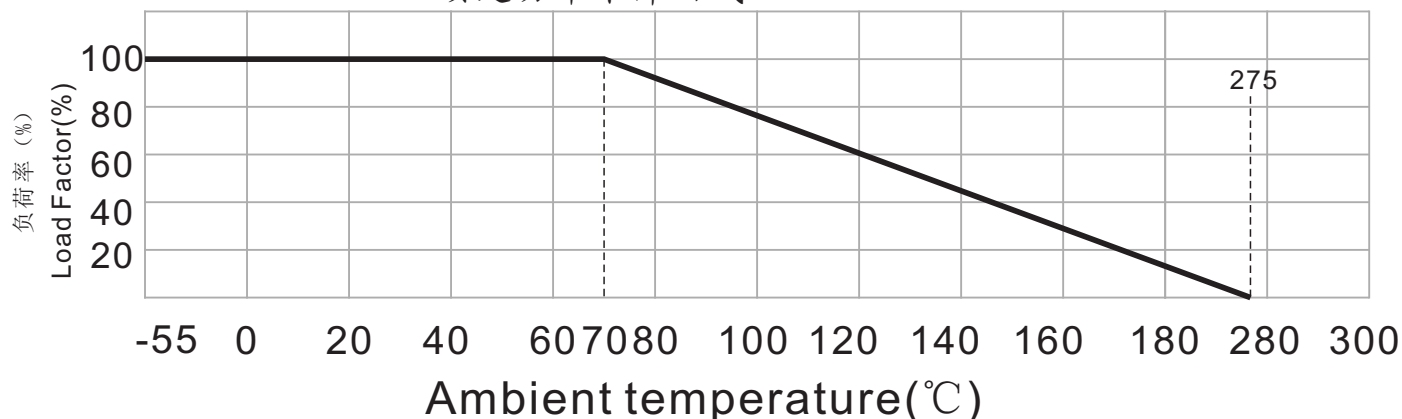
规格 Type	功率 Power		阻值范围 Resistance Range (Ω)	尺寸Dimensions(mm)					最高使用电压 Max working Voltage	耐电压 Dielectric with standing	温度系数 T.C.R
	标准型 Standard	小型化 Small volume		L ± 1	t max	D ± 0.5	H ± 3	d ± 0.05			
KNP14	1/4W	1/2WS	0.05~1K Ω	6.5	1.5	2.50	28.0	0.60	50V	250V	$\geq 10\Omega$ $\pm 20\text{PPM}/^\circ\text{C}$ $1\sim 9.9\Omega$ $\pm 50\text{PPM}/^\circ\text{C}$ $0.1\sim 0.99\Omega$ $100\text{PPM}/^\circ\text{C}$ $0.05\sim 0.099\Omega$ $300\text{PPM}/^\circ\text{C}$ $0.01\sim 0.049\Omega$ $600\text{PPM}/^\circ\text{C}$
KNP12	1/2W	1WS	0.05~2K Ω	9.0	2.0	3.50	28.0	0.60	50V	350V	
KNP01	1W	2WS	0.05~3K Ω	11.0	2.5	4.50	28.0	0.70	50V	350V	
KNP02	2W	3WS	0.05~5K Ω	16.0	2.5	5.0	28.0	0.70	200V	350V	
KNP03	3W	4WS	0.05~5K Ω	18.0	2.5	6.0	28.0	0.70	200V	500V	
KNP04	4W	5WS	0.05~10K Ω	18.0	2.5	6.0	28.0	0.70	200V	500V	
KNP05	5W	6WS	0.05~15K Ω	19.0	2.5	7.0	30.0	0.75	200V	500V	
KNP06	6W	7WS	0.05~33K Ω	22.0	2.5	7.50	33.0	0.75	200V	500V	
KNP07	7W	8WS	0.05~33K Ω	25.0	2.5	8.0	33.0	0.75	300V	500V	
KNP08	8W	9WS	0.05~33K Ω	32.0	2.5	8.0	33.0	0.75	300V	500V	
KNP09	9W	10WS	0.05~33K Ω	36.0	2.5	8.5	33.0	0.75	500V	500V	
KNP10	10W	12WS	0.05~33K Ω	36.0	2.5	8.5	33.0	0.75	500V	500V	
KNP12	12W	15WS	0.1~33K Ω	42.0	2.5	9.0	33.0	0.80	1000V	500V	
KNP15	15W	18WS	0.1~33K Ω	52.0	3.0	9.0	33.0	0.80	1000V	500V	
KNP18	18W	20WS	0.1~33K Ω	62.0	3.0	9.0	33.0	0.80	1000V	500V	
KNP20	20W	25WS	0.1~33K Ω	66.0	3.0	9.0	33.0	0.80	1000V	500V	
KNP25	25W	30WS	0.1~50K Ω	76.0	3.0	9.0	33.0	0.80	1000V	500V	
KNP30	30W	35WS	0.1~100K Ω	95.0	3.0	12.0	33.0	1.0	1000V	500V	
KNP35	35W	40WS	0.1~100K Ω	95.0	3.0	12.0	33.0	1.0	1000V	500V	
KNP40	40W	45WS	0.1~100K Ω	112.0	3.0	12.0	33.0	1.0	1000V	500V	

注意：小型产品请选择RWS，超小型产品选择RSS，高压脉冲型选择HVS，无感型产品KNR
更多产品需求请向我们的工程师咨询kwx@kwxcom.com

额定温度下降曲线图 Derating Curve

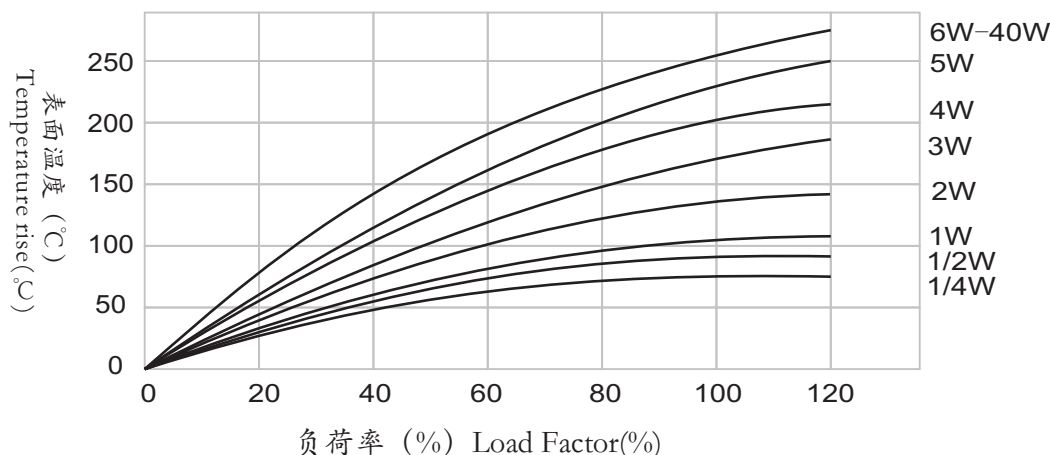
DERATING CURVE

额定功率下降曲线



KNP 线绕电阻器 WIRE WOUND RESISTOR

● 表面温升曲线 Temperature rising curve



● 性能Performance

试验项目 Test Items	规格值 Performance Requirements	试验方法 Test Methods(JIS C 5201-1)
电阻值 Resistance	规定的误差值内 Within specified tolerance	测量点从端盖10mm Measuring points are 10mm from the end cap
温度系数 T.C.R.	规定值内 Within specified T.C.R	室温+100℃ Room temperature+100℃
短时间过负荷 Short time overload	$\pm (1\%R + 0.05\Omega)$	4倍额定功率, 5秒 4 times the rated power for 5 seconds
负荷寿命 Load life	$\pm (5\%R + 0.1\Omega)$	Rated voltage at 70℃ for 1,000 hours 1.5hr ON/0.5hr OFF Cycles
耐湿负荷寿命 Load life in humidity	$\pm (5\%R + 0.1\Omega)$	额定电压40℃, 95% RH, 1000小时 Rated voltage at 40℃, 95%RH for 1,000 hours
耐湿性 Moisture resistance	$\pm (1\%R + 0.05\Omega)$	40℃, 95% RH, 240小时 40℃, 95%RH for 240 hours
温度循环 Temperature cycle	$\pm (1\%R + 0.05\Omega)$	5 cycles for -25℃ (30min); room temp. (30min) ~+85℃ (30min) room temp. (30min)
焊锡效果 Solderability	95%(min) coverage	Temp. of solder 245℃ $\pm 5^\circ\text{C}$ duration of immersion 3s $\pm 0.5\text{s}$
焊锡耐热 Resistance to soldering heat	$\pm (1\%R + 0.05\Omega)$	260℃ $\pm 5^\circ\text{C}$ for 10 seconds (焊锡槽) 350℃ $\pm 10^\circ\text{C}$ for 3.5 seconds (手焊锡)
绝缘电阻 Insulation resistance	> 1,000M Ω	500V绝缘测试1分钟 500V insulation test 1min.
不燃性 Flameproof	无燃烧现象 No evidence of flaming or arcing	AC voltage of 2,4,6,8,16,32 times the power rating for 1min. ($V \leq 4\text{times max, working voltage}$)

● 料号编号 ordering Information

例 example

KNP	14	J	R100	A520	S1
型号 Type	额定功率 Rated Power	误差值 Tolerance	电阻值 (Ω) Resistance	二次加工 Forming	型号 Style
	14: 1/4W 12: 1/2W 01: 1W 02: 2W 03: 3W	F $\pm 1\%$ J $\pm 5\%$	R100=0.1 1R00=1 10R0=10 1000=100		S1=Standard S2=Small volume