

NFR 无感固定电阻 Non-inductive Resistors



特性 Feature

(1)高功率小体积

High power in small size

(2)低温度系数、精度高、高频性能好。

Low temperature coefficient, high precision, and good high frequency performance.

(3)使用环境温度-55℃~+155℃

Operating ambient temperature:-55℃~+155℃

(4)真空溅射金属皮膜,涂层为湖绿色环氧树脂,防水性好。

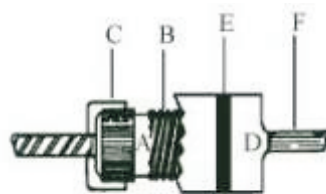
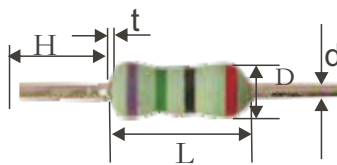
Film the metal in vacuum, the surface coating is blue resin with the good waterproof.

(5)阻值误差:±1%,±2%,±5%

Resistance tolerance:±1%,±2%,±5%

(6)无电感工艺设计。 Non-inductive

产品结构图 Construction Drawing



A	B	C	D	E	F
高铝瓷芯	高稳定性导电膜	铁帽	环氧树脂涂料	色环	镀锡铜线
High AL ₂ O ₃	High Stability Electric Conduction Film	Iron Cap	Epoxy Resin Coating	Color Ring	Tinned copper lead wire

规格尺寸及耐压性能 Dimensions and Voltage Performance

型号 Type	功率 Power	阻值范围 Resistance Range (Ω)	尺寸Dimensions(mm)					最大使用电压 Max. working voltage	最大负荷电压 Max. overload voltage	最高脉冲电压 Max. Pulse voltage	最高绝缘电压 Max. Insulation voltage
			L±1	t Max	D±0.5	d±0.05	H±3.0				
NFR	1/4W	20~2KΩ	6.0	1.5	2.3	0.75	26.0	$\sqrt{PR}$	700V	1000V	500V

备注Note:

a、额定电压 Rated voltage= $\sqrt{\text{功率Power} \times \text{阻值Resistance Value}}$

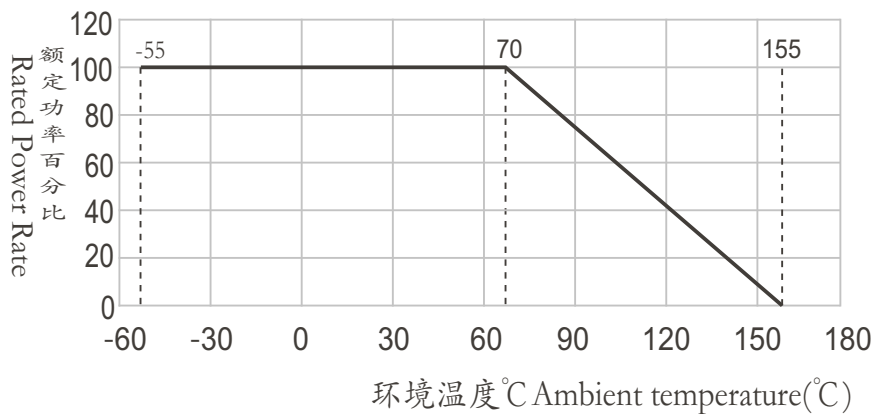
b、当计算得出的额定电压大于最大工作电压，使用时取二者较小值。

If the calculated rated voltage is higher than max.working voltage, it will be got the lower value.

参考规格Reference Standards

JIS C 5201-1

● 降功耗曲线 Derating Curve



● 性能Performance

试验项目 Test Items	性能 Performance	试验方法 Test Methods(JIS C 5201-1)
温度系数 Temperature coefficient	$-100\text{ppm}/^{\circ}\text{C} \leq \text{TCR} \leq 100\text{ppm}/^{\circ}\text{C}$	在常温及常温+100°C时分别测量电阻并计算每度的阻值变化率。 Test resistance value at normal temperature and normal temperature added 100°C, calculate $^{\circ}\text{C}$ resistance value change rate.
短时间过负荷 Short time overload	$\Delta R \leq \pm (0.5\%R_0 + 0.05\Omega)$	施加2.5倍额定功率或最高负荷电压（取较小者）5秒 2.5X rated power or Max. overload voltage(get the lower) for 5seconds.
断续过负荷 Pulse overload	$\Delta R \leq \pm (1\%R_0 + 0.05\Omega)$	4倍额定功率或最高断续负荷电压（取较小者）测试1秒，停止25秒，循环10000±200次，At 4Xrated power or Max. pulse overload voltage(get the lower)cycle 10000±200 times(1second on 25 seconds off)
耐焊接热 Resistance to soldering heat	$\Delta R \leq \pm (0.5\%R_0 + 0.05\Omega)$	在350±10°C的锡炉中浸入2~3秒。 Immerge into the 350±10°C tin stove for 2~3 seconds
可焊性 Solderability	焊锡面积覆盖率95%以上 Tth soldering area is over 98%	在245±3°C的锡炉中浸入2~3秒。 Immerge into the 245±3°C tin stove for 2~3 seconds
温度循环 Temperature cycle	$\Delta R \leq \pm (1.5\%R_0 + 0.1\Omega)$	在-55°C时放置30分钟，然后在+25°C时放置10~15分钟，然后再在+125°C时放置30分钟，然后再在25°C时放置10~15分钟，共循环5次。At -55°C for 30min, then at +25°C for 10~15min, then at +125°C for 30min, then at +25°C for 10~5, min, total 5cycles.
耐湿负荷寿命 Load life in humidity	$\Delta R \leq \pm (2\%R_0 + 0.1\Omega)$	在温度为40±2°C，相对湿度为90~95%的恒温恒湿箱中，施加额定电压或最大工作电压（取较小者）共1000小时（通1.5小时，断0.5小时）。Overload rated voltage or Max.working voltage(get the lower) for 1000hours(1.5hours on and half-hour off) at the 40±2°C and 90~95% relative humidity.
耐温负荷寿命 Load life in heat	$\Delta R \leq \pm (5\%R_0 + 0.1\Omega)$	在70±2°C恒温恒湿箱中施加额定电压或最大工作电压（取较小者）共1000小时（通1.5小时，断0.5小时）。Overload rated voltage or Max.working voltage(get the lower) for 1000hours(1.5hours on and half-hour off) at the 70±2°C.

● 料号编号 Ordering Information

例 example

NFR	025A	G	0	T520	75R00
产品名称 Product Name	功率 Power	精度 Tol	特殊码 Special Code	成型 Forming	阻值 Ohm
NFR	025A=0.25W	F=±1% G=±2% J=±5%		T260=T26 T520=T52 T710=T71 M001=M F001=F B001=B	20R00=20Ω 75R00=75Ω 2KR00=2KΩ