

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 $-55^{\circ}\text{C} \sim +155^{\circ}\text{C}$

Operating ambient temperature: $-55^{\circ}\text{C} \sim +155^{\circ}\text{C}$

(4) 真空溅射金属皮膜, 涂层为湖绿色环氧树脂, 防水性好。

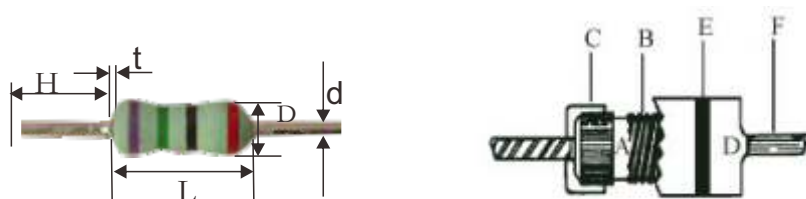
Film the metal in vacuum, the surface coating is blue resin with the good waterproof.

(5) 阻值误差: $\pm 1\%, \pm 5\%$ 。

Resistance tolerance: $\pm 2\%, \pm 5\%$ 。

(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_2O_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
			$L \pm 1$	tMax	$D \pm 0.5$	$d \pm 0.05$	$H \pm 30$				
NFR	1/4W	75	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 = $\sqrt{\text{功率Power} \times \text{阻值Resistance Value}}$

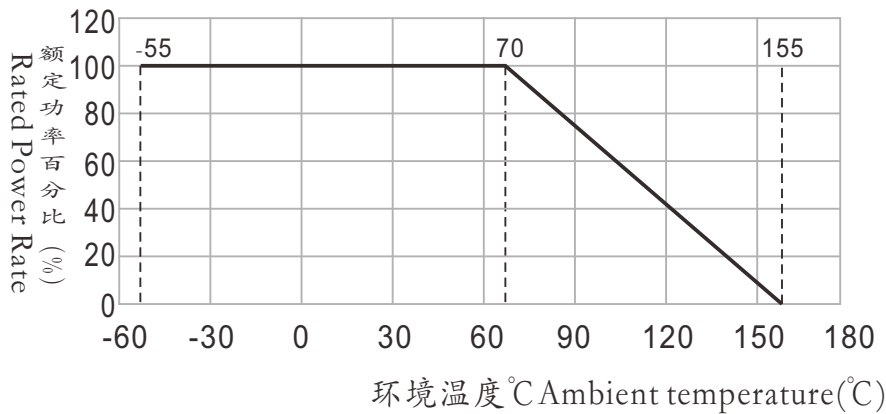
b、当计算得出的额定电压大于最大工作电压，使用时取二者较小值。

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 °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 10~15min, 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	G=±2% J=±5%		T260=T26 T520=T52 T710=T71 M001=M F001=F B001=B	75R00=75Ω