

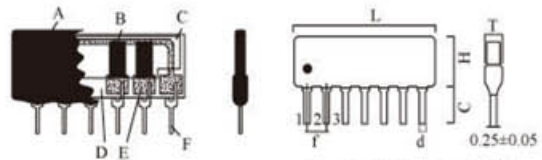
Resistor Network



●特点 Features:

- 1、小型及高精密度包装、适宜印刷电路板使用。
Small size with high density packing, used for Print PCB.
- 2、使用环境温度
Operating ambient temperature: $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$.
- 3、阻值误差
Resistance tolerance: $\pm 1\%$ 、 $\pm 2\%$ 、 $\pm 5\%$ 。

●产品结构图 Construction Drawing:



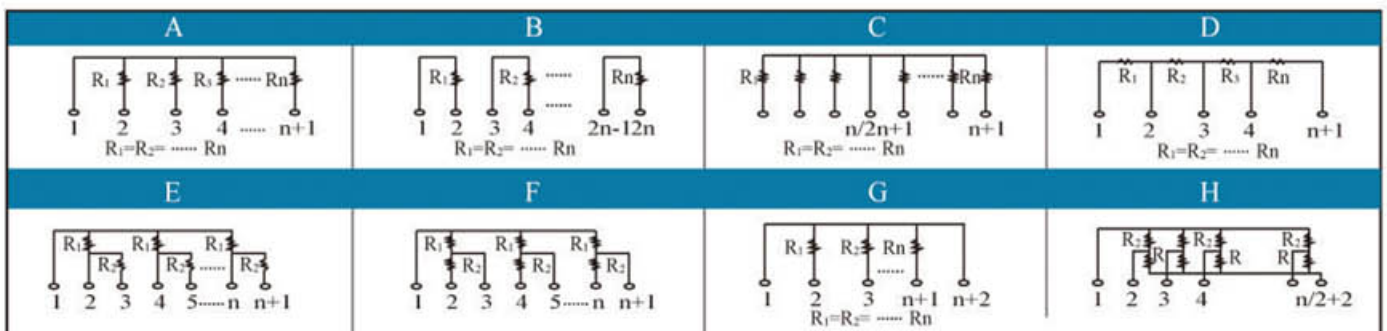
注：圆点表示为第一个引脚
Note: Dot means for the first pin.

- A、表层树脂封装 Protective coating
- B、电阻体 Resistive film
- C、玻璃保护层 Glass Protective layer
- D、陶瓷基片 Ceramic substrate
- E、内部电极 Inner electrode
- F、引脚 Pin

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

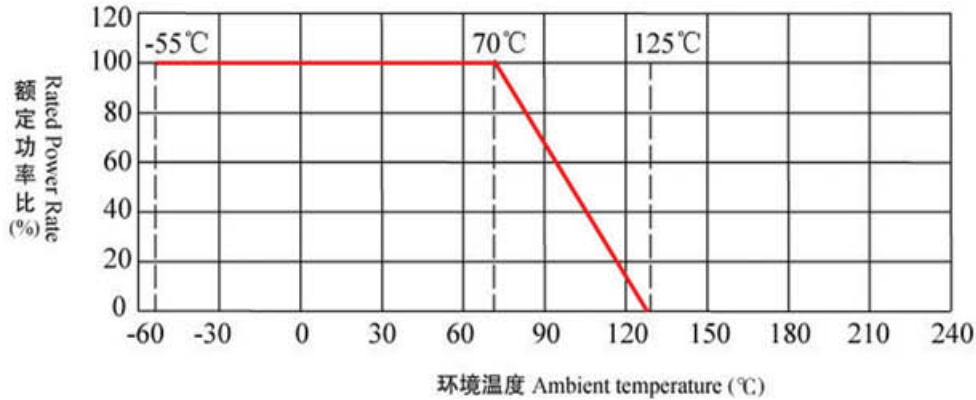
料号 Part No.	规格 Type	脚数 Pin Qty	尺寸 Dimensions (mm)						最高使用电压 Max. working voltage	最高负荷电压 Max. overload voltage	阻值范围 Resistance range
			L (Max.)	H (Max.)	T (Max.)	$C^{+0.2}_{-0.1}$	$d \pm 0.02$	$f \pm 0.2$			
GRA018	1/8W	004	10.2	5.08	2.5	4.5	0.5	2.54	100V	150V	10R~1M
		005	12.7	5.08	2.5	4.5	0.5	2.54	100V	150V	10R~1M
		006	15.3	5.08	2.5	4.5	0.5	2.54	100V	150V	10R~1M
		007	17.8	5.08	2.5	4.5	0.5	2.54	100V	150V	10R~1M
		008	20.4	5.08	2.5	4.5	0.5	2.54	100V	150V	10R~1M
		009	22.9	5.08	2.5	4.5	0.5	2.54	100V	150V	10R~1M
		010	25.4	5.08	2.5	4.5	0.5	2.54	100V	150V	10R~1M
		011	28.0	5.08	2.5	4.5	0.5	2.54	100V	150V	10R~1M
		012	30.5	5.08	2.5	4.5	0.5	2.54	100V	150V	10R~1M
		013	33.1	5.08	2.5	4.5	0.5	2.54	100V	150V	10R~1M
		014	35.6	5.08	2.5	4.5	0.5	2.54	100V	150V	10R~1M

●电路结构 Circuit Structure:





● 额定功率递减图 Rated Power Derating Curve:



● 性能测试 Performance Test:

测试项目 Test Item	测试条件 Test Condition	性能 Performance
温度系数 Temperature coefficient	在常温及常温+100°C时分别测量电阻值并计算每度的阻值变化率。Test the resistance value at normal temperature and normal temperature added 100°C, calculate per °C resistance value change rate.	250ppm/°C
短时间过负荷 Short time overload	施加2.5倍额定电压或最高负荷电压(取较小者)5秒。 2.5 × rated voltage or Max. overload voltage (get the lower) for 5 seconds.	$\Delta R \leq \pm (1\%R_0 + 0.05\Omega)$
耐焊接热 Resistance to soldering heat	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.	$\Delta R \leq \pm (0.5\%R_0 + 0.05\Omega)$
可焊性 Solderability	在245 ± 3°C锡炉中浸入时间: 2~3秒。 Immerge into the 245 ± 3°C tin stove for 2~3 seconds.	焊锡面积覆盖率95%以上 The soldering area is over 95%
温度循环 Temperature cycling	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 30 min, then at +25°C for 10~15 min, then at +125°C for 30 min, then at +25°C for 10~15 min, total 5 cycles.	$\Delta R \leq \pm (0.5\%R_0 + 0.05\Omega)$
耐湿负荷寿命 Load life in humidity	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 1000 hours (1.5 hours on and half-hour off) at the 40±2°C and 90~95% relative humidity.	$\Delta R \leq \pm (3\%R_0 + 0.05\Omega)$
耐温负荷寿命 Load life in heat	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)1000小时(通1.5小时,断0.5小时)。Overload rated voltage or Max. working voltage (get the lower) for 1000 hours (1.5 hours on and half-hour off) at the 70±2°C.	$\Delta R \leq \pm (3\%R_0 + 0.05\Omega)$
引脚强度 Pin strength	将引线焊接在网络电阻的受试引出端后, 拉到500g止。 Solder the lead wire on the Array Resistors Pin, pull strength need reach 500g.	$\Delta R \leq \pm (1\%R_0 + 0.05\Omega)$ 引脚无可见损伤 No mechanical damage

● 料号规则 Part No. Regulation:

GRA	018	J	0	006	A	10K00
产品名称 Product Name	功率 Power	精度 Tol.	特殊码 Special Code	脚数 Pin	电路 Circuit	阻值 Ohm
排列电阻器 Resistor Network	018 = 1/8W	F = ±1% G = ±2% J = ±5%		004 = 4 Pin 005 = 5 Pin 014 = 14 Pin	A B C D E F G H	0R100 = 0.1Ω 0R220 = 0.22Ω 10R00 = 10Ω 10K00 = 10KΩ 1M000 = 1MΩ