

●RGC Metal plate noninductive cement resistor

●RGC 金属片无感水泥电阻器

## 一、INTRODUCTION 说明

- This product features low resistance, small size, high load and stable performance.  
该产品具有阻值低、体积小、负荷大、性能稳定的特点。
- Good heat-durabilty, low temperature coefficient, low noise, high overload power.  
耐热性能好、温度系数小、噪音低、负荷功率大。
- Operating ambient temperature 温度使用范围:  $-55^{\circ}\text{C}\sim+2750^{\circ}\text{C}$ 。
- Low inductive 低电感。
- Resistance tolerance 阻值精度:  $\pm 5\%$ ;  $\pm 10\%$ 。

## 二、DIMENSIONS 规格尺寸

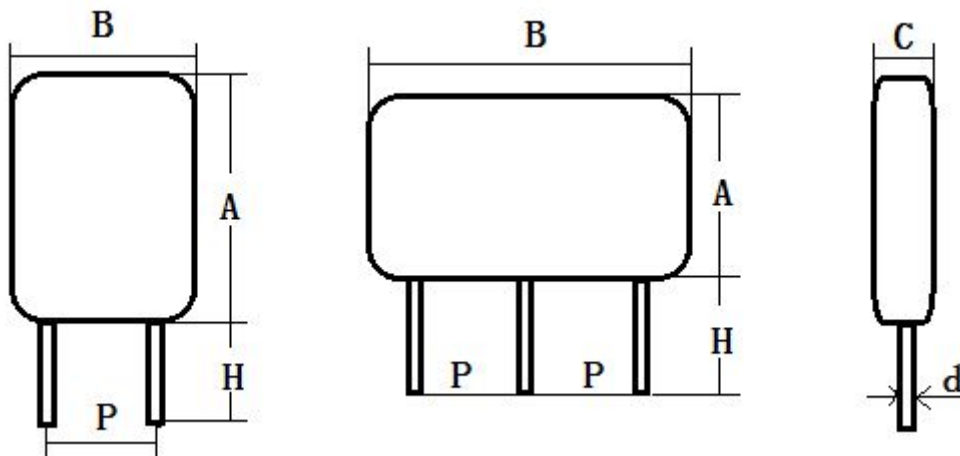


Table-1 (表-1)

Type 型号	Power 功率(W)	Dimension 尺寸(Unit 单位: mm)					
		A±1.5	B±1.5	C±1	H±1.5	P±1	φd±0.05
RGC	2W	8.5	14.0	5.0	4~18	9.0	0.75
	3W	13.0	14.0	5.0	4~18	9.0	0.75
	5W	18.0	14.0	5.0	4~18	9.5	0.75
	7W	18.0	14.0	5.0	4~18	9.5	0.75
	10W	17.0	26.0	5.0	4~18	20.0	0.75
	2W+2W	8.5	26.0	5.0	4~18	10.0	0.75
	3W+3W	13.0	26.0	5.0	4~18	10.0	0.75
	5W+5W	17.0	26.0	5.0	4~18	10.0	0.75
	7W+7W	20.0	26.0	5.0	4~18	10.0	0.75

### 三、ELECTRICAL CHARACTERISTICS 电气特性

Table-2 (表-2)

Type 型号	Power 功率 (W)	Resistance 阻值范围 (Ω)	Resistance Tolerance 阻值精度 (%)	Max.working Voltage 最大工作电压 (V)	Max. load voltage 最大负荷电压 (V)	Max.isolatio n voltage 最高绝缘电压 (V)
RGC	2W	0.01~2.2	J±5% K±10%	100V	100V	800V
	3W	0.01~2.2		100V	100V	800V
	5W	0.01~2.7		150V	150V	1000V
	7W	0.01~2.7		150V	150V	1000V
	10W	0.01~4.7		300V	300V	1000V
	2W+2W	0.01~4.7		200V	200V	1000V
	3W+3W	0.01~4.7		250V	250V	1000V
	5W+5W	0.01~4.7		300V	300V	1000V
	7W+7W	0.01~4.7		350V	350V	1000V

### 四、RATED VOLTAGE OF RESISTOR 电阻额定电压计算方法

The DC or AC voltage calculated by the square root of the product of the rated resistance and the rating power.

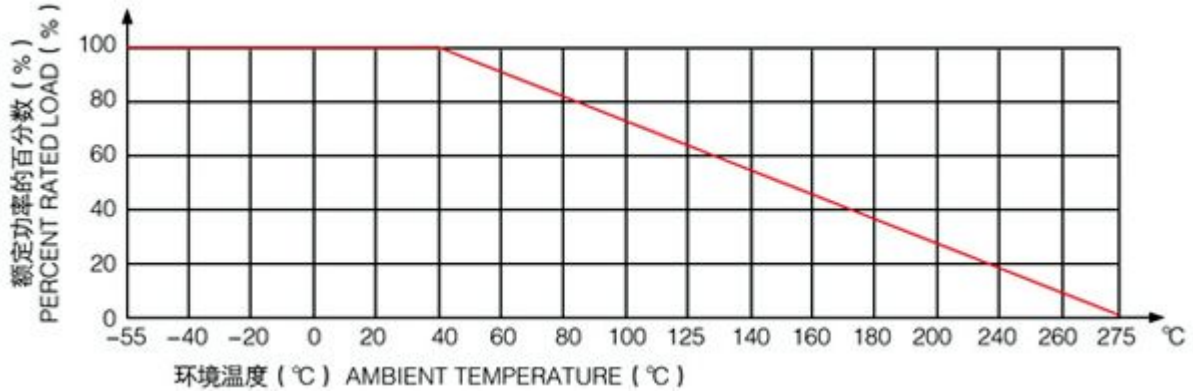
用标称阻值和额定功耗乘积的平方根计算直流或交流有效值电压。

$$E = \sqrt{PR}$$

E: Rated voltage (V) 额定电压  
P: Power rating (W) 额定功率  
R: Nominal resistance (Ω) 阻值

In no case shall the rated voltage be greater than the applicable maximum continuous working voltage.  
在任何情况下可适用的最大连续工作电压均不得大于额定电压。

Power derating curve & Temperature application range 降功耗及电阻适用温度范围图



五、MAIN TEST ITEM & SPECIFICATION AND TEST METHOD 主要检测项目方法及性能要求

Table-3 (表-3)

TEST ITEM 检测项目	TEST METHOD 检测方法	SPECIFICATION 性能要求
Variation of resistance with temperature 阻值随温度变化	-55°C/20°C; 20°C/155°C 3cycles 3次循环	T.C.R 温度系数 ±350×10 <sup>-6</sup> /°C
Solderability 可焊性	Terminal except 3mm shall be immersed in the solder. 浸入深度距端部 3mm Solder temperature 焊接温度: 230±5°C Immersion time 浸入时间: 15±0.5sec	Cover a minimum of 95% of the surface being immersed. 浸润面积最少达 95%以上
Resistance to soldering heat 耐焊接热	Terminal except 3mm shall be immersed in the solder. 浸入深度距端部 3mm Solder temperature 焊接温度: 350±10°C Immersion time 浸入时间: 3.5±0.5sec	Change in resistance 阻值变化率 ΔR ≤ ±(1%R+0.05Ω)
Temperature cycling 温度快速变化	+25°C~+125°C 5cycles 5次循环	Change in resistance 阻值变化率 ΔR ≤ ±(1%R+0.05Ω)
Damp heat with load 稳态湿热	40±2°C; 90~95%RH; 1000 <sup>+48</sup> <sub>-0</sub> H	Change in resistance 阻值变化率 ΔR ≤ ±(5%R+0.1Ω) Appearance Without distinct damage 外观无损坏

Continue Table-6 (续表-6)

TEST ITEM 检测项目	TEST METHOD 检测方法	SPECIFICATION 性能要求
Load life in humidity 恒温耐久性	Temperature 恒温 70°C; DC Rated voltage. 直流额定电压; 1.5/0.5H-ON/OFF; 1000 <sup>+48</sup> <sub>-0</sub> H	Change in resistance 阻值变化率 $\Delta R \leq \pm (5\%R + 0.1 \Omega)$
Terminals Strength 引出端强度	Tensile 拉力 10N 30sec Bendin 弯曲 5N 2cycles Torsion 扭转 5cycles	Without distinct damage or looseness of terminals 没有异常损伤或引出端松动 $\Delta R \leq \pm (1\%R + 0.05 \Omega)$
Vibration 振动	Entire frequency range 振动频率范围: 10-55-10Hz/min Amplitude 1.5mm Each 3direction/2hrs 全振幅 1.5mm X.Y.Z 3方向 各2小时	Without mechanical damage 没有机械损伤 Change in resistance 阻值变化率 $\Delta R \leq \pm (1\%R + 0.05 \Omega)$
Short time Overload 短期过载	Applying voltage: 5 times or 10 times rated Power 5sec. 施加的电压: 5倍或10倍额定功率 5秒 Note:1-4W 5time;5W-100W 10time 注: 1-4W 施加5倍功率; 5-100W 施加10倍 功率	No visible damage 无可见损伤 $\Delta R \leq \pm (2\%R + 0.05 \Omega)$
Nonflammability 难燃性	Respectivel load AC voltage by 5,10 or 16 times rated power for 5 m. 分别按5倍, 10倍, 16倍额定功率施加交流 负荷5分钟	No Visible flame 不可有明火

七、 ORDER SAMPLE 订货示例

RGC-5W-0.1RJ : RGC    5W    0.1R    J  
 型号    功率    阻值    精度  
 Type    Power    Resistance    Resistance tolerance

Execution: 拟制:	Authorize: 批准:	Date: 日期:	Number: 编号:
南京步梯电子有限公司			BT-S2013-007