



南京先正电子股份有限公司

Nanjing Shagon Electronics Co.,Ltd

瓷壳线绕固定电阻器产品规格书

Ceramic Case Wirewound Fixed Resistors Specifications

产品规格 Type: RX27

客户 Customer:

客户部品号 Customer Type:

拟制 CHECKED BY: 谢 娟 2018.10.24

审核 REVIEWED BY: 袁海兵 2018.10.24

批准 APPROVED: 周荣林 2018.10.24

南京先正电子股份有限公司

Nanjing Shagon Electronics Co.,Ltd

厂 址: 南京市中山科技园中鑫路 698 号

Address: No.698 ZHONGXIN ROAD,ZHONGSHAN SCIENCE AND TECHNOLOGY PARK, NANJING

电话 (Tel) :025-84824998 84822654

电传 (Fax) :025-84824707

邮政编码 (P.C.) :211500



1、适用范围 Scope

本规格书适用于南京先正电子股份有限公司生产的 RX27 型瓷壳线绕电阻器。This specification shall be applied to RX27 type Ceramic Case Wire-wound Resistor product by NANJING SHAGON ELECTRONICS CO.,LTD .

2、命名 Designation

RX27 -1 5W **** J
Type Power rating Resistance tolerance

2.1 规格型号及尺寸 Model and size

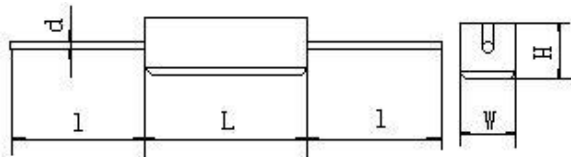


Figure 1

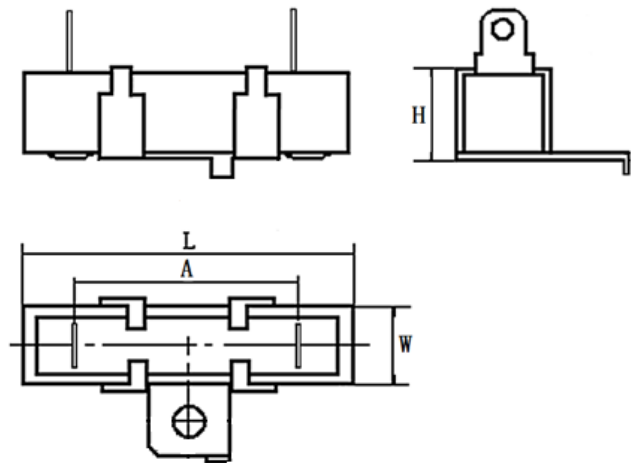


Figure 2

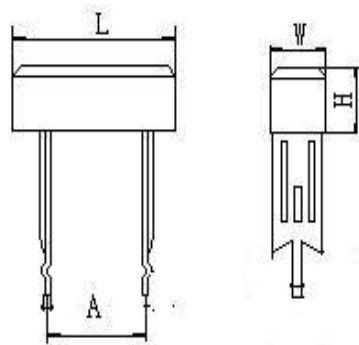


Figure 3

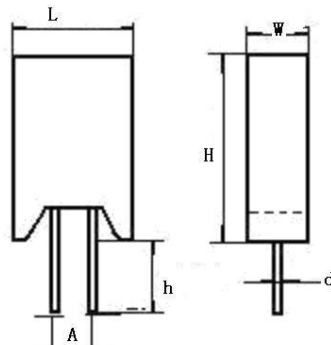


Figure 4

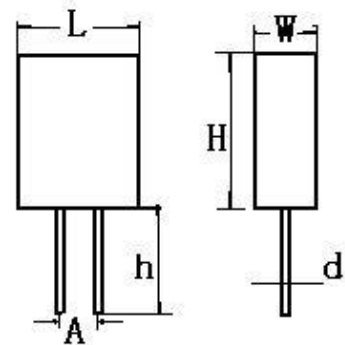


Figure 5

单位 unit: mm

Type	L	W ± 1	H ± 1	l	A	h ± 1	d ± 0.1	Figure
RX27-1-1W	14 ± 1	6.5	6.5	25 ± 2	—	—	0.65	Figure 1
RX27-1-2W	18 ± 1	6.4	6.4		—	—	0.7	
RX27-1-3W	22 ± 1	8	8		—	—	0.74	
RX27-1-5W	22 ± 1	9.5	9.5		—	—		
RX27-1-7W	35 ± 1.5	9.5	9.5		—	—		

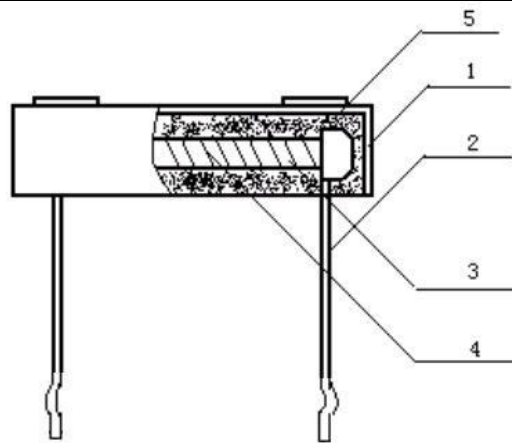


RX27-1-10W	48±2	9.5	9.5		—	—	0.8	
RX27-1-15W	48±2	12.5	12.5		—	—		
RX27-1-20W	63±2	12.5	12.5		—	—		
RX27-1-30W	75±2	19	19		—	—		
RX27-1-40W	90±2	19	19		—	—		
RX27-1-50W	90±2	19	19		—	—		
RX27-1-60W	90±2	19	19		—	—		
RX27-3-5W	27±1	9.5	9.5	—	15±1.5	—	—	Figure 3
RX27-3-7W	35±1.5	9.5	9.5	—	22.5±1.5	—	—	
RX27-3-10W	48±2	9.5	9.5	—	35±1.5	—	—	
RX27-3-15W	48±2	12.5	12.5	—	32.5±1.5	—	—	
RX27-3-20W	63±2	12.5	12.5	—	48±1.5	—	—	
RX27-3-25W	63±2	12.5	12.5	—	48±1.5	—	—	
RX27-3-50W	90±2	19	19	—	68±2	—	—	
RX27-4H-15W	48±2	12.5	12.5	—	36±1.5	—	—	Figure 2
RX27-4H-20W	63±2	12.5	12.5	—	46.5±1.5	—	—	
RX27-4H-30W	75±2	19	19	—	58±2	—	—	
RX27-4H-40W	90±2	19	19	—	68±2	—	—	
RX27-4H-45W	90±2	19	19	—	68±2	—	—	
RX27-4H-50W	90±2	19	19	—	68±2			
RX27-4H-60W	90±2	19	19	—	68±2	—	—	
RX27-4H-90W	100±2	33	46	—	78±2	—	—	
RX27-5-2W	11±1	7	21	—	5±1	5	0.74	Figure 4
RX27-5-3W	12±1	8	25	—	5±1	5		
RX27-5-5W	13±1	9	26	—	5±1	5		
RX27-5-7W	13±1	9	38.5	—	5±1	5	0.8	
RX27-5-20W	21±1	13	45	—	7.5±1	10		
RX27-5-10W(S)	16±1	11	34	—	7.5±1	10		
RX27-5-10W(L)	13±1	9	51	—	5±1	10		
RX27-6-5W	15±1	6	18	—	10±1	10	0.8	Figure 5

3、结构 Structure

- ① 瓷壳 Ceramic case
- ② 镀锡铜线（或镀锡电极片）Tin Plated Copper wire（Tin Plated electrode pole）
- ③ 电阻丝 Resistance Wire
- ④ Structure and Material 结构与材料

No	Structure 构造	Material 材料
1	Ceramic case 瓷壳	Alumina ceramic 氧化铝陶瓷
2	Lead wire 引出端	Tin Plated Copper wire（Tin Plated electrode pole）镀锡铜线（或镀锡电极片）
3	Ceramic core 基体	Alumina ceramic 氧化铝陶瓷
4	Resistor element 电阻合金线	Ni-Cr wire or Ni-Cu wire Ni-Cr 合金线
5	Enclose stuffing 填充料	colophony 树脂 石英砂 quartz sand



4、额定值 Rating

型号 Type	70℃额定功率 Power Rating 70℃(W)	温度系数 TCR 10 ⁻⁶ /℃	绝缘电压 Limiting Insulation Voltage(V)	阻值范围 Resistance Range(Ω)
RX27-1	1W	± 250	700	0.1~100
	2W			0.1~390
	3W			0.18~680
	5W			0.18~680
	7W			0.22~1.5K
	10W			0.33~6K
	20W			0.39~3.3K
	30W			0.39~3.3K
	40W			0.39~3.3K
	50W			0.39~3.3K
	60W			0.39~3.3K
RX27-3	5W			0.22~820
	7W			0.39~1.5K
	10W			0.39~2.2K
	15W			0.39~3.3K
	20W			0.39~3.6K
	25W			0.39~3.6K
	50W			0.39~3.6K
RX27-4H	15W			0.39~3.3K
	20W			0.39~3.3K
	30W			0.39~3.3K
	40W			0.39~3.3K
	45W			0.39~3.3K
	60W			0.39~3.3K
	90W			0.39~3.3K
RX27-5	3W			0.18~680
	5W			0.18~680
	10W			0.18~680
RX27-6	5W			0.18~680



5、Marking 标志



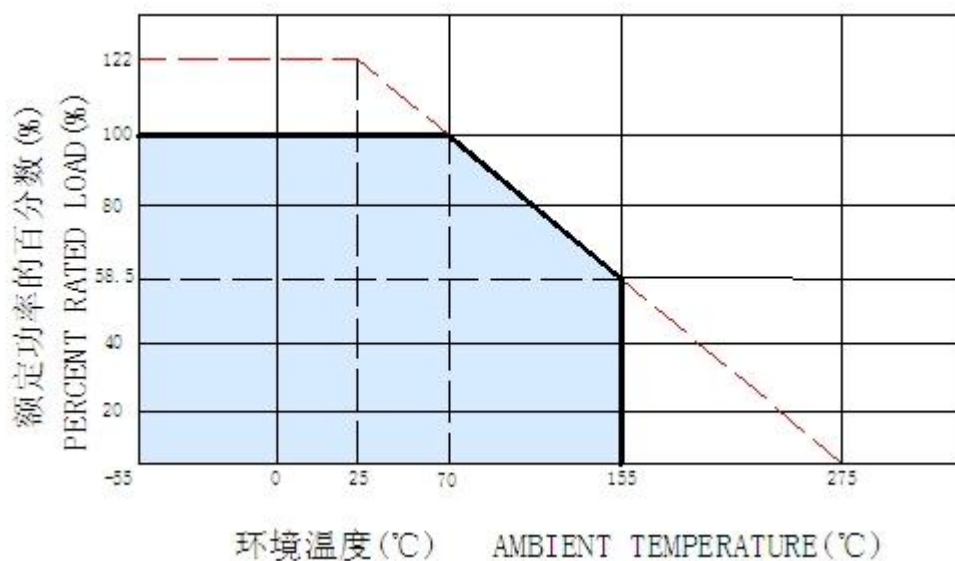
电阻器上应印制下列标志 The marking on each resistor shall stamp the following items.

1. 型号 Type
2. 阻值偏差 Resistance Tolerance
3. 额定功率 Power Rating
4. 标称阻值 Nominal Resistance-Value
5. 商标 Trade Mark

6、Derate

电阻器按下列曲线降功率

Resistors cored by this specification a derate according to the following curve:



6-1 额定电压 Rated voltage

直流电压或交流有效值电压按下列公式中要求进行计算 The D.C. or A.C.R.M.S. voltage calculated from the square root of the product of the rated resistance and the

$$E = \sqrt{PR}$$

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

7、特性 Characteristics

**7-1 电性能 Electrical Characteristics**

注①: 除了阻值变化要求应从分规范 GB 5732-85 的表 1 和表 2 相应地选定外,试验项目和性能要求的条款号引自总规范 GB/T 5729-94。Note①: Sub-clause numbers of test and performance requirements refer to the Generic Specification ,IEC Publication GB 5732-85,except for resistance change requirements, which have to be selected from Tables I and II of the sectional specification,as appropriate.

条款号和试验项目(见注①) Sub-clause number and Test(see Note 1)	试验条件(见注①) Conditions of test (see Note 1)	性能要求(见注①) Performance requirements (see Note 1)
4.5 阻值 4.5 Resistance	按 4.5.2 条 As in 4.5.2	按 4.5.2 条 As in 4.5.2
4.8 阻值随温度变化 4.8 Variation of resistance with temperature	-55℃/+25℃ +25℃/+155℃	+/- $250 \times 10^{-6} / ^\circ\text{C}$ +/- $250 \times 10^{-6} / ^\circ\text{C}$
4.13 过载 4.13 Overload	施加电压:10 倍额定功率或 2 倍元件极限电压(取较小者) The applied voltage shall be 10 times the rated power or twice the limiting element voltage,Whichever is the less severe 持续时间: 5 秒 Test duration: 5sec 外观检查 Visual examination 阻值 Resistance	无可见损伤, 标志清楚 No visible damage Legible marking $\Delta R \leq \pm (1\%R + 0.1\Omega)$
4.7 耐电压 4.7 Voltage Proof	金属 V 形块 Metallic V-block 1000V; AC-60sec Condition A	无击穿或飞弧 No breakdown or flashover

7-2 机械性能 Mechanical characteristic

条款号和试验项目(见注①) Sub-clause number and Test(see Note 1)	试验条件(见注①) Conditions of test (see Note 1)	性能要求(见注①) Performance requirements (see Note 1)
4.16 引出端强度 4.16 Robustness of terminations	拉力 Tensile 25N-30sec 弯曲 Bending 5N-2 cy 扭转 Torsion 5 cy 外观检查 Visual examination 阻值 Resistance	没有异常损伤或引出端松动 Without distinct damage or looseness of terminals $\Delta R \leq \pm (1\%R + 0.05\Omega)$



RX27 瓷壳线绕电阻器产品规格书

4.22 振动 4.22 Vibration	安装方法: 见本规范 1.1 条 Method of mounting: see 1.1 of this specification 程序: B ₄ Procedure: B ₄ 振动频率范围 10-55-10Hz/min Entire frequency range 全振幅 1.5mm X.Y.Z 3 方向 各 2 小时 Amplitude 1.5mm Each 3 direction/2hrs 外观检查 Visual examination 阻值 Resistance	外观 Appearance 没有机械损伤 Without mechanical damage 阻值变化率 Change in resistance $\Delta R \leq \pm(1\%R + 0.05\Omega)$
4.18 耐焊接热 4.18 Resistance to soldering heat	浸入深度距端部 3mm Terminal except 3mm shall be immersed in the solder. 焊接温度 solder temperature: $260 \pm 5^\circ\text{C}$ 浸入时间 Immersion time : $10 \pm 1\text{sec}$	阻值变化率 Change in resistance $\Delta R \leq \pm(1\%R + 0.05\Omega)$
4.17 可焊性 4.17 Solderability	浸入深度距端部 3mm Terminal except 3mm shall be immersed in the solder. 焊接温度 solder temperature: $245 \pm 5/-10^\circ\text{C}$ 浸入时间 Immersion time : $2 \pm 0.5\text{sec}$	浸入面积最少达 90%以上 Cover a minimum of 90% of the surface being immersed.

7-3 耐久性能 Endurance characteristic

条款号和试验项目(见注①) Sub-clause number and Test(see Note 1)	试验条件(见注①) Conditions of test (see Note 1)	性能要求(见注①) Performance requirements (see Note 1)
4.19 温度快速变化 4.19 Temperature cycling	5 次循环 5 cycles 阶段 1 2 3 4 Step 温度 -55 ± 3 常温 RT 155 ± 3 常温 R Temp ($^\circ\text{C}$) 时间 30 2-3 30 2-3 Time (min) 外观检查 Visual examination 阻值 Resistance	阻值变化率 Change in resistance $\Delta R \leq \pm(1\%R + 0.05\Omega)$ 没有异常损伤 Without distinct damage
4.24 稳态湿热 4.24 Damp heat with load	$40 \pm 2^\circ\text{C}$ 90~95%RH 1000^{+48}_{-0} Hr 施加的电压: 0.1 倍额定电压或 0.1 倍元件极限电压 (取较小者) The applied voltage shall be 0.1 times rated voltage or 0.1 times limiting element voltage, whichever is the less severe. 绝缘电阻 Insulation resistance	阻值变化率 Change in resistance $\Delta R \leq \pm(5\%R + 0.1\Omega)$ 外观 Appearance Without distinct damage $R \geq 100\text{M}\Omega$



RX27 瓷壳线绕电阻器产品规格书

4.25.1 室温耐久性 4.25.1 Endurance at room temperature	室温 1000 ⁺⁴⁸ ₋₀ Hr Room temperature 直流额定电压 1.5/0.5hr-ON/OFF DC Rated voltage. 绝缘电阻 Insulation resistance	阻值变化率 Change in resistance $\Delta R \leq \pm (5\%R + 0.1\Omega)$ 外观 Appearance 没有异常损伤,标志易辨认 Without distinct damage ,marking shall be legible $R \geq 1G\Omega$
意外过载 Overload Flammability	对电阻器施加 5 倍, 10 倍和 16 倍额定功率的过负荷交流电压, 但不超过 4 倍额定工作电压。持续时间 5 $\pm$ 0.5min ,或电阻器开路时为止。 Imposed on the resistor 5 times, 10 times and 16 times rated power of the AC voltage overload, but not more than 4 times rated working voltage. Continuous power 5 $\pm$ 0.5min, or until the resistor is open.	电阻脱离 10 秒后没有明火 The resistor shall be disconnected after 10sec or more without any emission of flame.

8、包装箱标志内容 Packing box mark

- | | |
|--------------------|--|
| (1) 南京先正电子股份有限公司品名 | Nanjing Shagon Electronics CO.,LTD designation |
| (2) 阻值精度等级 | Resistance tolerance。 |
| (3) 标称阻值 | Nominal resistance |
| (4) 数量 | Quantity。 |
| (5) 制造日期 | Production Date |
| (6) 制造厂名 | Manufacturer |