

陶瓷外壳线绕电阻器 (RX27)

Ceramic case wire wound resistor

■ 产品概述 (Product Introduction)

陶瓷外壳线绕电阻器是将电阻线绕在无碱性耐热瓷件上，外面加上耐热、耐湿及耐腐蚀之材料保护固定并把绕线电阻体放入方形瓷框内，用特殊不燃性耐热水泥充填密封而成。水泥电阻的外侧主要是陶瓷材质。水泥电阻器，就是用水泥（其实不是水泥而是耐火泥，这是俗称）灌封的电阻器，即将电阻线绕在无碱性耐热瓷件上，外面加上耐热、耐湿及耐腐蚀材料保护固定，并把绕线电阻体放入

Ceramic case wire wound resistor is the resistance wire wound on the alkali-free heat-resistant porcelain, the outside of which is protected and fixed by heat-resistant, moisture-resistant and corrosion-resistant material, and the wire wound resistor body is put into the square porcelain frame, filled and sealed with special noncombustible heat-resistant cement. The outside of the cement resistor is mainly ceramic. A cement resistor is a resistor that is sealed with cement (actually not cement but refractory cement, which is commonly known as), that is, the resistor wire is wound on an alkali-free heat-resistant porcelain piece, outside with heat-resistant, moisture-resistant and corrosion-resistant material protection fixed, and put the wound resistor into the square porcelain frame, with special non-combustible heat-resistant cement filled and sealed. There are two kinds of cement resistors: common cement resistors and cement wire wound resistors. The shape of the cement resistor is as shown. Cement resistor is a kind of wire wound resistor. It is a high power resistor and can allow a large current to pass through.

■ 产品应用 (Product Application)

陶瓷外壳线绕电阻器的作用和一般电阻一样，只是可以用在电流大的场合，比如和电动机串联，限制电动机的启动电流，阻值一般不大。水泥电阻器具有体积小、耐震、耐湿、耐热及良好散热、低价格等特性，广泛应用于电源适配器、音响设备、音响分频器、仪器、仪表、电视机、汽车等设备中。

The function of the ceramic case wire wound resistor is the same as the general resistor, but it can be used in the situation of high current, such as in series with the motor, limiting the starting current of the motor, resistance value is generally not big. The cement resistor has the characteristics of small size, shock resistance, moisture resistance, heat resistance, good heat dissipation and low price, widely used in power adapter, audio equipment, audio frequency divider, instruments, instrumentation, television, automotive and other equipment.

■ 主要特点 (Main features)

- 1、耐震、耐湿、耐热及良好散热，低价格等特性。
Shock resistance, moisture resistance, heat resistance and good heat dissipation, low price and other characteristics.
- 2、完全绝缘，适用于印刷电路板。
Completely insulated, suitable for printed circuit boards.
- 3、瓷棒上绕线然后接头电焊，制出精确电阻值及延长寿命。
The wire is wound on the porcelain rod and the joints are welded to produce accurate resistance values and extend life.
- 4、高电阻值采用金属氧化皮膜体(MO)代替绕线方式制成。
The high resistance is made of metal oxide film (MO) instead of winding.
- 5、耐热性优，电阻温度系数小，呈直线变化。
Good heat resistance, small resistance temperature coefficient, linear change.
- 6、耐短时间超负载，低杂音，阻值经年无变化。
Resistance to short-time overload, low noise, resistance has not changed over the years.
- 7、防爆性能好，起保护作用。
Good explosion-proof performance, play a protective role.

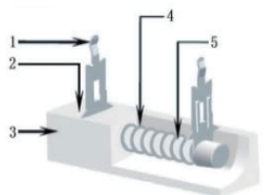
■ 产品性能 (Product Feature)

项目Project	试验方法Test method	要求 Request
阻值偏差Resistance deviation		±5%, ±10%
绝缘耐压Insulation withstand voltage	AC1500V/60S	无飞弧或击穿
可焊性Solderability	265±5℃, 2S+0.5S 浸深Soak deeply 1.5-2.0mm	▲ R≤± (1%R+0.05Ω) 无可见损伤, 沾锡面>95%
引出端强度The strength of the leading end	拉力轴向 20N 10S ±1S	▲ R≤± (1%R+0.05Ω) 无可见损伤
过负荷Overload	10*Pr/5S	▲ R≤± (1%R+0.05Ω) 无可见损伤
电阻温度系数Temperature coefficient of resistance		≤±250PPM/℃
耐焊接热Resistance to welding heat	350℃±10℃, 浸深3-3.5mm	▲ R≤± (1%R+0.05Ω) 无可见损伤
振动Vibration	10-500Hz, 0.75mm, 98m/S²取小者 x,y,z三方向共6小时	▲ R≤± (1%R+0.05Ω) 无可见损伤
室温耐久性Durability at room temperature	1.5小时通, 0.5小时断, 1000小时	▲ R≤± (1%R+0.05Ω) R≥1GΩ
恒定湿热Constant damp heat	40℃ RH=90-95% 96小时	▲ R≤± (1%R+0.05Ω) R≥100MΩ
升温Temperature Rise		▲ T≤250℃



结构图
Structural Diagram

结构图 (Structural diagram)

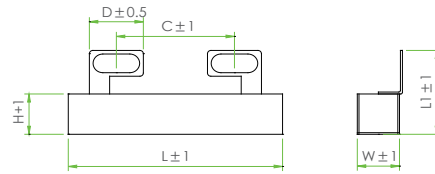
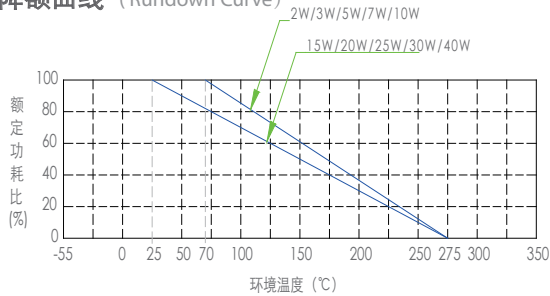


- 1、镀锡铁片 (Tinned iron plate)
- 2、填充料 (Padding materials)
- 3、瓷壳 (Ceramic case)
- 4、电阻丝或电阻膜 (Resistive wire or resistive film)
- 5、玻璃纤维或陶瓷基体 (Fiberglass or ceramic core)

■ 执行标准 (Applicable Standards)

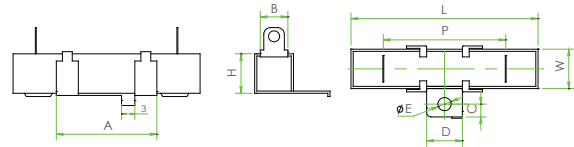
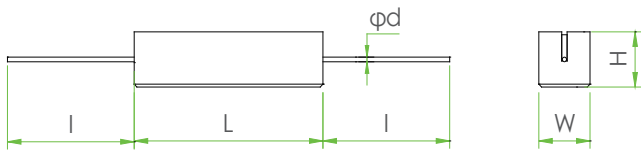
GB/T5729-1994 Fixed resistor used in electronic equipment

■ 降额曲线 (Rundown Curve)



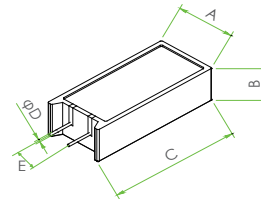
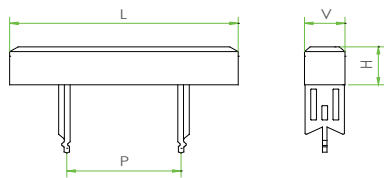
电阻器品种 Type	功率 (W)	阻值范围 (Ω)	尺寸				
			L	W	H	C	D
RX27-4HL-10	10	1-100K	48±1	12±1	12±1	28±1	14±1
RX27-4HL-20	20	1-100K	63±1	12±1	12±1	28±1	14±1

■ 产品尺寸图 (Product Size)



电阻器品种 Type	功率 (W)	阻值范围 (Ω)	尺寸			
			W/H	L	d	l
RX27-1-2	2	0.15-200	6.4±1	17.5±1.2	0.8	35
RX27-1-3	3	0.20-390	8.0±1	22.0±1.5	0.8	35
RX27-1-5	5	0.24-680	9.5±1	22.0±1.5	0.8	35
RX27-1-7	7	0.33-500	9.5±1	35.0±1.5	0.8	35
RX27-1-10	10	0.51-2000	9.5±1	48.0±1.5	0.8	35
RX27-1-15	15	1.00-2400	12.5±1.2	48.0±1.5	1.0	35
RX27-1-20	20	1.00-3000	12.5±1.2	63.5±2.0	1.0	35

电阻器品种 Type	功率 (W)	阻值范围 (Ω)	尺寸								
			L	P	w	H	A	B	C	D	E
RX27-4-10	10	0.51-2000	48.0±1	33.0-2	9.5±1.0	9.5±1.0	25	5	6.5	12	4.0
RX27-4-15	15	1.00-2400	48.0±1	34.0-2	12.5±1.2	12.5±1.2	25	6/4.8	6.5	12	4.0
RX27-4-20	20	1.00-3000	63.5±1	49.5-3	12.5±1.2	12.5±1.2	25	6/4.8	6.5	12	4.0
RX27-4-25	25	1.20-3600	63.5±1	46.5-3	16.0±1.0	16.0±1.0	25	7.5/6.3	6.5	12	4.2
RX27-4-30	30	1.50-4300	75.0±1.2	56.0-4	19.0±1.5	19.0±1.5	40	7.5/6.3	8	18	4.2
RX27-4-40	40	1.80-4300	90±2.5	71.0-4	19.0±1.5	19.0±1.5	40	7.5/6.3	8	18	4.2



电阻器品种 Type	功率 (W)	阻值范围 (Ω)	尺寸			
			L	P	W	H
RX27-3-3	3	0.20-390	24±1	12.5	9.0±1	9.0±1
RX27-3-5	5	0.24-680	27±1	15.0	9.5±1	9.5±1
RX27-3-7	7	0.33-500	35±1.5	22.5	9.5±1	9.5±1
RX27-3-10	10	0.51-2000	48±1.5	35.0	9.5±1	9.5±1
RX27-3-15	15	1.00-2400	48±1.5	32.5	12.5±1	12.5±1
RX27-3-20	20	1.00-3000	63±1.5	50.0	12.5±1	12.5±1

电阻器品种 Type	功率 (W)	阻值范围 (Ω)	尺寸				
			A	B	C	E	D
RX27-5-2	2	0.22-270	11±1	7±1	20±1.0	5±1	0.8
RX27-5-3	3	0.27-680	12±1	8±1	25±1.0	5±1	0.8
RX27-5-5	5	0.27-680	13±1	9±1	26±1.0	5±1	0.8
RX27-5-7	7	0.68-1200	13±1.5	9±1	38.5±1.5	5±1	0.8
RX27-5-10	10	1.0-1800	16±1.5	13±1	35±1.5	7.5±1	0.8
RX27-5-20	20	0.2-2000	20±1.5	9±1	50±1.5	10±1	0.8

■ 成品识别码 (Product Identification Code)

RX27-3	-	20	-	40R	-	J
代码 Code		额定功率 Rated Power		电阻阻值 Resistance Value		阻值误差 Resistance Tolerance H=±3% J=±5% K=±10%