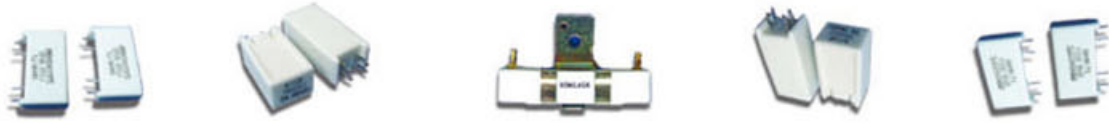


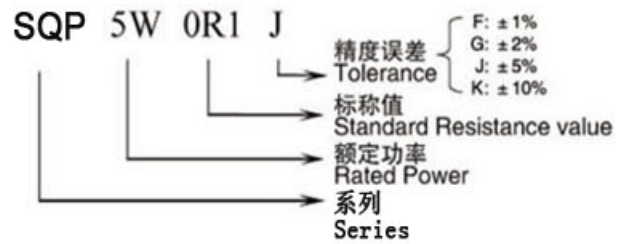
# Cement Resistors



### ●特点 Features:

- 1、耐热性好、温度系数小、噪声低、负荷功率大、绝缘性高。  
Good heat-durability, low temperature coefficient, low noise, high load power, high insulating capacity.
- 2、使用环境温度 Operating ambient temperature:  $-55^{\circ}\text{C} \sim +275^{\circ}\text{C}$ 。
- 3、阻值误差 Resistance tolerance:  $\pm 1\%$ 、 $\pm 2\%$ 、 $\pm 5\%$ 、 $\pm 10\%$ 。

### ●标志含义:

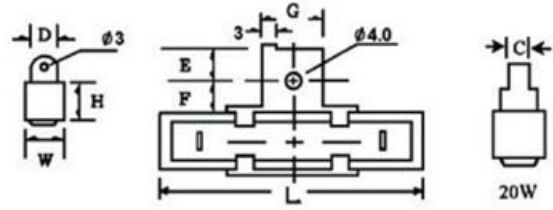


### ●产品结构图 Construction Drawing:

<p>SQP</p>	<p>A、填充料 Padding materials B、镀锡铜线 Tinned copper lead wire. C、瓷壳 Ceramic shell D、玻璃纤维或陶瓷基体或电阻膜层 Fiberglass or ceramic core or resistors film E、电阻丝或陶瓷基体 Resistors wire or ceramic core F、铁帽 Iron cap</p>
<p>SQZ</p>	<p>A、端子 Iron plate B、填充料 Padding materials C、瓷壳 Ceramic shell D、电阻丝或陶瓷基体 Resistors wire or ceramic core E、玻璃纤维或陶瓷基体或电阻膜层 Fiberglass or ceramic core or resistors film</p>
<p>SQM</p>	<p>A、填充料 Padding materials B、瓷壳 Ceramic shell C、电阻丝或陶瓷基体 Resistors wire or ceramic core D、玻璃纤维或陶瓷基体或电阻膜层 Fiberglass or ceramic core or resistors film E、铁帽 Iron cap F、镀锡铜线 Tinned copper lead wire.</p>

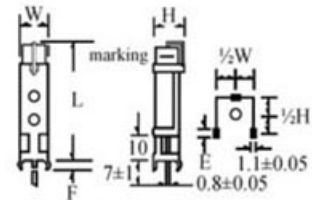
## Cement Resistors

●SQHG:



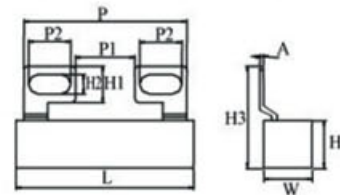
料号 Part No.	功率 Power	尺寸 Dimensions(mm)								阻值范围 Forming Type			
		H±1.5	W±1	D±1	L±1.5	G±1	C±0.5	E±0.5	F±0.5	RXR	BRX	HRX	NRX
SQHG10B	10W	10	10	5	48	12	-	5	7	0R1~12K	1R~470R	1K~100K	0R2~47R
SQHG15B	15W	12	12.5	6	48	12	-	5	9	0R2~18K	1R~560R		0R2~56R
SQHG20B	20W	14	14.5	6	60	12	3	5	9	0R2~20K	1R~620R		0R2~68R
SQHG25B	25W	14	14.5	6	60	12	-	5	9	0R2~20K	1R~620R		0R2~68R
SQHG30B	30W	19	19	7.5	75	18	-	7	9	0R3~39K	1R~820R		0R3~300R
SQHG40B	40W	19	19	7.5	88	18	-	7	9	0R5~56K	1R~1K2		0R3~330R

●SQS:



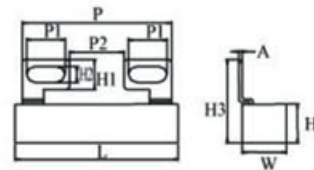
料号 Part No.	功率 Power	尺寸 Dimensions(mm)					阻值范围 Resistance range			
		H±1.5	W±1	L±1	E±1	F±1	RXR	BRX	HRX	NRX
SQS05B	5W	10.0	10.0	28.0	1.4	4.0	0R1~3K3	1R~120R	100R~100K	0R1~27R
SQS07B	7W	10.0	10.0	36.0	1.4	4.0	0R1~7K5	1R~390R	820R~100K	0R2~39R
SQS10B	10W	10.0	10.0	60.0	1.4	4.0	0R1~12K	1R~470R	1K~100K	0R2~47R
SQS15B	15W	15.0	12.5	50.0	2.5	4.0	0R2~18K	1R~560R		0R2~56R
SQS20B	20W	14.5	14.0	61.0	2.5	4.0	0R2~30K	1R~620R		0R2~68R
SQS25B	25W	14.5	14.0	61.0	2.5	4.0	0R2~30K	1R~620R		0R2~68R

●MS:



料号 Part No.	功率 Power	尺寸 Dimensions(mm)										阻值范围 Resistance range
		L±1.5	P±1.5	P1±1	P2±1	W±1	H±1	A±0.05	H1±1	H2±1	H3±1	HRX
HRX04B	4W	48	43	11	12	13	12	0.5	9	5	24	1K~100K
HRX10B	10W	48	43	11	12	13	12	0.5	9	5	24	1K~100K

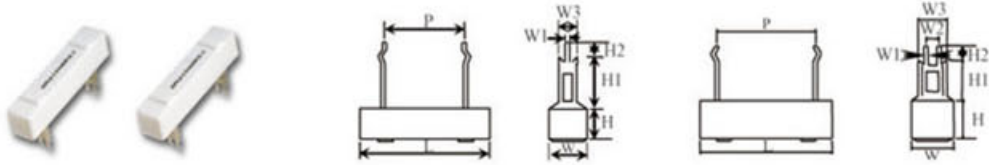
●MS:



料号 Part No.	功率 Power	尺寸 Dimensions(mm)										阻值范围 Resistance range
		L±1.5	P±1.5	P1±1.5	P2±0.5	W±1	H±1	A±0.05	H1±1	H2±1	H3±1	HRX
MS05B	4W	48	43	12	11.5	13	12	0.5	10	5	23	1K~100K
MS15B	10W	48	43	12	11.5	13	12	0.5	10	5	23	1K~100K

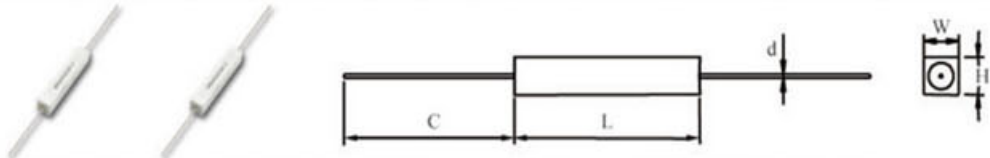
## Cement Resistors

●SQH:



料号 Part NO.	功率 Power	尺寸 Dimensions(mm)										阻值范围 Resistance range			
		L±1.5	W±1	H±1	P±1.5	H±1	H2±0.5	W1±0.5	W2±0.5	W3±0.5	RXR	BRX	HRX	NRX	
SQH03B	3W	22.0	9.0	9.0	10.0	10.5	4.5	1.5	5.0	7.0		1R~120R		OR1~27R	
SQH04B	4W	22.0	9.0	9.0	10.0	10.5	4.5	1.5	5.0	7.0		1R~120R		OR1~27R	
SQH05B	5W	28.0	10.0	10.0	15.0	10.5	4.5	1.5	5.0	7.0	OR1~6K2	1R~330R	560R~100K	OR1~33R	
SQH06B	6W	28.0	10.0	10.0	15.0	10.5	4.5	1.5	5.0	7.0	OR1~6K2	1R~330R	560R~100K	OR1~33R	
SQH07B	7W	36.0	10.0	10.0	20.0	10.5	4.5	1.5	5.0	7.0	OR1~7K5	1R~390R	820R~100K	OR2~39R	
SQH08B	8W	36.0	10.0	10.0	20.0	10.5	4.5	1.5	5.0	7.0	OR1~7K5	1R~390R	820R~100K	OR2~39R	
SQH09B	9W	48.0	10.0	10.0	30.0	10.5	4.5	1.5	5.0	7.0	OR1~12K	1R~470R	1K~100K	OR2~47R	
SQH10B	10W	48.0	10.0	10.0	30.0	10.5	4.5	1.5	5.0	7.0	OR1~12K	1R~470R	1K~100K	OR2~47R	
SQH11B	11W	48.0	10.0	10.0	30.0	10.5	4.5	1.5	5.0	7.0	OR1~12K	1R~470R	1K~100K	OR2~47R	
SQH15B	15W	48.0	12.5	12.0	30.0	30.0	4.5	3.0	8.0	10.0	OR2~18K	1R~560R		OR2~56R	
SQH20B	20W	63.0	15.0	13.0	42.0	30.0	4.5	3.0	8.0	10.0	OR2~20K	1R~620R		OR2~68R	
SQH25B	25W	63.0	15.0	13.0	42.0	30.0	4.5	3.0	8.0	10.0	OR2~20K	1R~620R		OR2~68R	
SQH30B	30W	75.0	19.0	19.0	55.0	25.0	4.5	3.0	8.0	10.0	OR3~39K	1R~820R		OR3~300R	
SQH40B	40W	88.0	19.0	19.0	72.0	24.0	4.5	3.0	8.0	10.0	OR5~56K	1R~1K2		OR3~330R	
SQH50B	50W	88.0	19.0	19.0	72.0	24.0	4.5	3.0	8.0	10.0	OR5~56K	1R~1K2		OR3~330R	
SQH100B	100W	133.0	24.0	24.0	113.0	25.0	4.5	3.0	8.0	10.0		1R~1K5			

●SQO:



料号 Part NO.	功率 Power	尺寸 Dimensions(mm)					阻值范围 Resistance range	
		L±1.5	W±1	H±1	C±3	d±0.05	BRX	HRX
SQO04B	4W	20.0	6.5	6.5	35.0	0.75	OR1~120R	560R~100K
SQO05B	5W	25.0	6.5	6.5	35.0	0.75	OR1~330R	560R~100K
SQO06B	6W	38.0	7.0	7.0	35.0	0.75	OR1~390R	820R~100K
SQO07B	7W	38.0	8.5	8.5	35.0	0.75	OR1~390R	820R~100K
SQO08B	8W	38.0	8.5	8.5	35.0	0.75	OR1~390R	820R~100K

●SQM:

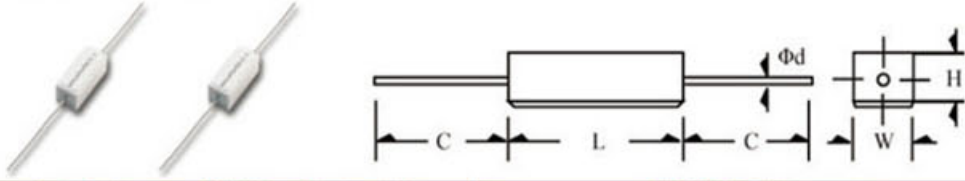


料号 Part NO.	功率 Power	尺寸 Dimensions(mm)							阻值范围 Resistance range			
		L±1.5	W±1	D±1	H±1	d±0.05	W1±1	RXR	BRX	HRX	NRX	
SQM01B	1W	10.0	10.0	5.2	3.5	0.65	4.0	OR1~100R			OR2~2R7	
SQM02B	2W	20.5	11.0	7.0	4.0	0.75	4.0	OR1~820R		560R~100K	OR1~10R	
SQM03B	3W	25.0	12.0	8.0	4.0	0.75	4.0	OR1~3K3	1R~120R	560R~100K	OR1~27R	
SQM04B	4W	25.0	13.0	10.0	4.0	0.75	4.0	OR1~3K3	1R~120R	560R~100K	OR1~27R	
SQM05B	5W	25.0	13.0	10.0	4.0	0.75	4.0	OR1~3K3	1R~120R	560R~100K	OR1~27R	
SQM06B	6W	39.0	13.0	10.0	4.0	0.75	4.0	OR1~7K5	1R~390R	820R~100K	OR2~39R	
SQM07B	7W	39.0	13.0	10.0	4.0	0.75	4.0	OR1~7K5	1R~390R	820R~100K	OR2~39R	
SQM08B	8W	39.0	13.0	10.0	4.0	0.75	4.0	OR1~7K5	1R~390R	820R~100K	OR2~39R	
SQM09B	9W	51.0	13.0	10.0	4.0	0.75	4.0	OR1~12K	1R~470R	1K~100K	OR2~47R	
SQM10B	10W	51.0	13.0	10.0	4.0	0.75	4.0	OR1~12K	1R~470R	1K~100K	OR2~47R	
SQM11B	11W	51.0	13.0	10.0	4.0	0.75	4.0	OR1~12K	1R~470R	1K~100K	OR2~47R	
SQM10BS	10WS	35.0	16.0	12.0	5.0	0.75	8.0	OR1~6K2	1R~330R	560R~100K	OR1~33R	
SQM15BS	15WS	35.0	16.0	12.0	5.0	0.75	8.0	OR1~6K2	1R~330R	560R~100K	OR1~33R	
SQM15B	15W	51.0	13.0	10.0	4.0	0.75	4.0	OR1~12K	1R~470R		OR2~47R	
SQM20B	20W	35.0	16.0	12.0	5.0	0.75	8.0	OR2~12K	1R~660R		OR2~66R	

备注: 可提供更大功率产品 (25W-60W) Note: Products can provide more power (25W-60W)

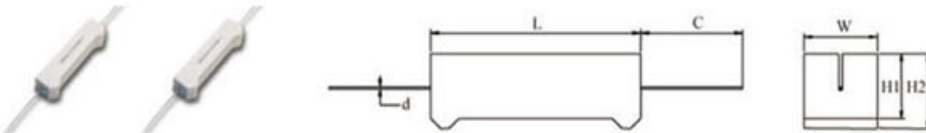
## Cement Resistors

●SQP:



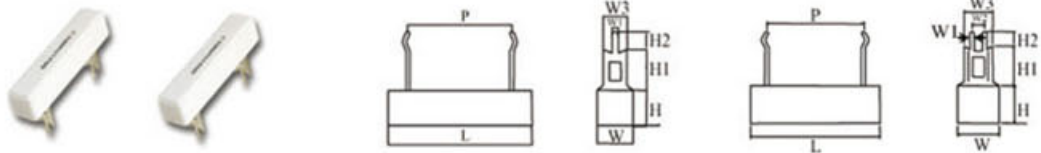
料号 Part NO.	功率 Power	尺寸 Dimensions(mm)						阻值范围 Resistance range			
		L±1.5	W±1	H±1	C±3	d±0.05	RXR	BRX	HRX	NRX	
SQP01B	1W	12.5	5.5	5.7	23.0	0.62	0R1~100R		100R~100K	0R2~2R7	
SQP02B	2W	18.0	6.5	6.5	21.0	0.75	0R1~820R		220R~100K	0R1~10R	
SQP03B	3W	22.0	8.0	8.0	35.0	0.75	0R1~3K3	1R~120R	100R~100K	0R1~27R	
SQP04B	4W	22.0	8.0	8.0	35.0	0.75	0R1~3K3	1R~120R	100R~100K	0R1~27R	
SQP05B	5W	22.0	10.0	10.0	35.0	0.75	0R1~3K3	1R~120R	100R~100K	0R1~27R	
SQP06B	6W	35.0	10.0	10.0	35.0	0.75	0R1~7K5	1R~390R	820R~100K	0R2~39R	
SQP07B	7W	35.0	10.0	10.0	35.0	0.75	0R1~7K5	1R~390R	820R~100K	0R2~39R	
SQP08B	8W	35.0	10.0	10.0	35.0	0.75	0R1~7K5	1R~390R	820R~100K	0R2~39R	
SQP09B	9W	48.0	10.0	10.0	33.0	0.75	0R1~12K	1R~470R	1K~100K	0R2~47R	
SQP10B	10W	48.0	10.0	10.0	33.0	0.75	0R1~12K	1R~470R	1K~100K	0R2~47R	
SQP11B	11W	48.0	10.0	10.0	33.0	0.75	0R1~12K	1R~470R	1K~100K	0R2~47R	
SQP15B	15W	48.0	12.5	12.5	33.0	0.75	0R2~18K	1R~560R		0R2~56R	
SQP17B	17W	60.0	14.0	14.0	33.0	0.75	0R2~30K	1R~620R		0R2~68R	
SQP20B	20W	60.0	14.0	14.0	33.0	0.75	0R2~30K	1R~620R		0R2~68R	
SQP25B	25W	60.0	14.0	14.0	33.0	0.75	0R2~30K	1R~620R		0R2~68R	
SQP30B	30W	75.0	18.0	18.0	35.0	0.80	0R2~30K	1R~1KR		0R2~68R	
SQP40B	40W	90.0	19.0	19.0	35.0	1.0	0R2~30K	1R~1KR		0R2~68R	

●SQT:



料号 Part NO.	功率 Power	尺寸 Dimensions(mm)							阻值范围 Resistance range			
		L±1.5	W±1	H1±1	H2±1	C±3	d±0.05	RXR	BRX	HRX	NRX	
SQT05B	5W	22.0	10.0	9.50	10.5	35.0	0.75	0R1~3K3	1R~120R	100R~100K	0R1~27R	
SQT06B	6W	35.0	10.0	10.0	11.5	35.0	0.75	0R1~7K5	1R~390R	820R~100K	0R2~39R	
SQT07B	7W	35.0	10.0	10.0	11.5	35.0	0.75	0R1~7K5	1R~390R	820R~100K	0R2~39R	
SQT08B	8W	35.0	10.0	10.0	11.5	35.0	0.75	0R1~7K5	1R~390R	820R~100K	0R2~39R	
SQT09B	9W	48.0	10.0	10.0	12.5	33.0	0.75	0R1~12K	1R~470R	1K~100K	0R2~47R	
SQT10B	10W	48.0	10.0	10.0	12.5	33.0	0.75	0R1~12K	1R~470R	1K~100K	0R2~47R	
SQT11B	11W	48.0	10.0	10.0	12.5	33.0	0.75	0R1~12K	1R~470R	1K~100K	0R2~47R	
SQT15B	15W	48.0	12.5	13.5	17.0	33.0	0.75	0R2~18K	1R~560R		0R2~56R	
SQT17B	17W	59.0	14.0	13.5	17.0	33.0	0.75	0R2~30K	1R~620R		0R2~68R	
SQT20B	20W	59.0	14.0	13.5	17.0	33.0	0.75	0R2~30K	1R~620R		0R2~68R	
SQT25B	25W	59.0	14.0	13.5	17.0	33.0	0.75	0R2~30K	1R~620R		0R2~68R	

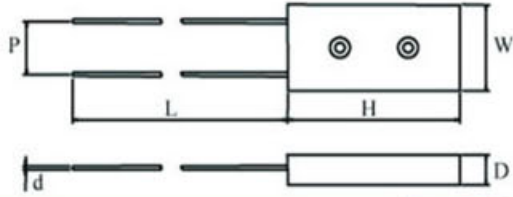
●SQZ:



料号 Part NO.	功率 Power	尺寸 Dimensions(mm)										阻值范围 Resistance range			
		L±1.5	W±1	H±1	P±1.5	H1±1	H2±0.5	W1±0.5	W2±0.5	W3±0.5	RXR	BRX	HRX	NRX	
SQZ03B	3W	22.0	9.0	9.0	10.0	10.5	4.5	1.5	5.0	7.0		1R~120K		0R1~27R	
SQZ04B	4W	22.0	9.0	9.0	10.0	10.5	4.5	1.5	5.0	7.0		1R~120K		0R1~27R	
SQZ05B	5W	28.0	10.0	10.0	15.0	10.5	4.5	1.5	5.0	7.0	0R1~6K2	1R~330R	560R~100K	0R1~33R	
SQZ06B	6W	28.0	10.0	10.0	15.0	10.5	4.5	1.5	5.0	7.0	0R1~6K2	1R~330R	560R~100K	0R1~33R	
SQZ07B	7W	36.0	10.0	10.0	20.0	10.5	4.5	1.5	5.0	7.0	0R1~7K5	1R~390R	820R~100K	0R2~39R	
SQZ08B	8W	36.0	10.0	10.0	20.0	10.5	4.5	1.5	5.0	7.0	0R1~7K5	1R~330R	820R~100K	0R2~39R	
SQZ09B	9W	48.0	10.0	10.0	30.0	10.5	4.5	1.5	5.0	7.0	0R1~12K	1R~470R	1K~100K	0R2~47R	
SQZ10B	10W	48.0	10.0	10.0	30.0	10.5	4.5	1.5	5.0	7.0	0R1~12K	1R~470R	1K~100K	0R2~47R	
SQZ11B	11W	48.0	10.0	10.0	30.0	10.5	4.5	1.5	5.0	7.0	0R1~12K	1R~470R	1K~100K	0R2~47R	
SQZ15B	15W	48.0	12.5	12.0	30.0	30.0	4.5	3.0	8.0	10.0	0R2~18K	1R~560R		0R2~56R	
SQZ20B	20W	63.0	15.0	13.0	42.0	30.0	4.5	3.0	8.0	10.0	0R2~20K	1R~620R		0R2~68R	
SQZ25B	25W	63.0	15.0	13.0	42.0	30.0	4.5	3.0	8.0	10.0	0R2~20K	1R~620R		0R2~68R	

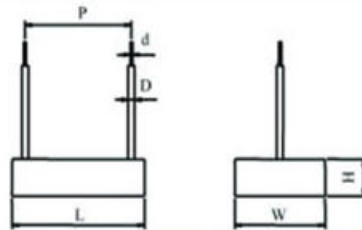
# Cement Resistors

● BKG:



料号 Part No.	功率 Power	尺寸 Dimensions(mm)						阻值范围 Resistance range	
		W±2	D±1	H±2	L±3	P±2	d±0.5	RXR	
BKG80B	80W	43.5	15	87.5	450	27	2	1R~100R	

● ZC-11:



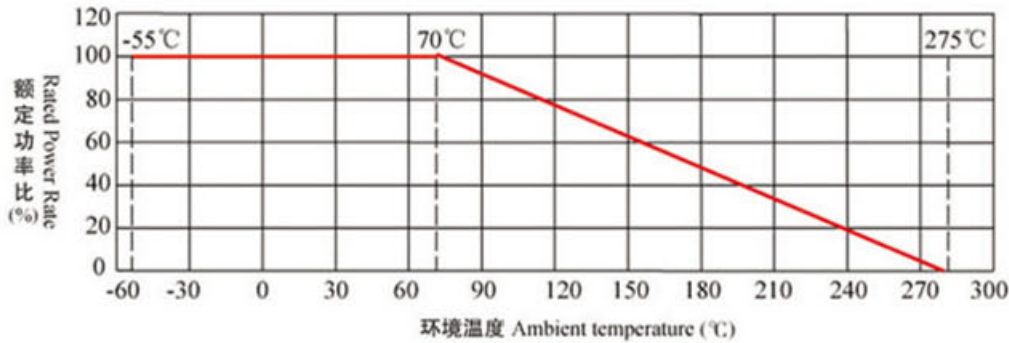
料号 Part No.	功率 Power	尺寸 Dimensions(mm)						阻值范围 Resistance range	
		L±1	H±1	P±1	d±0.1	D±0.2	W±1	HRX	NRX
ZC-1105B	5W	41	11	33	0.8	2.0	28	1K~100K	0R2~39R

● 电器性能参数 Electricity Performance Parameters:

功率 Power	电器性能参数 Electricity Performance Parameters		
	最高使用电压 Max. working voltage	最高负荷电压 Max. overload voltage	耐电压 Withstand voltage
1W	150V	300V	500V
2W	150V	500V	1000V
3W	350V	600V	1000V
5W	350V	600V	1000V
7W	500V	700V	1000V
10WS	500V	800V	1000V
10W	750V	850V	1000V
15W	1000V	1000V	1000V
20W	1000V	1000V	1500V
25W	1000V	1000V	1500V
30W	1000V	1000V	1500V
40W	1000V	1000V	1500V
50W	1200V	1000V	1700V
80W	1400V	1000V	2000V
100W	1500V	1000V	2200V

## Cement Resistors

### ● 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℃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℃, calculate per °C resistance value change rate.	±300ppm/°C
短时间过负荷 Short time overload	1~4W施加5倍额定功率,5~10W施加10倍额定功率的电压或最高负荷电压(取较小者)5秒。1~4W: According 5 times rated power to account the voltage, 5~10W: According 10 times rated power to account the voltage or max. overload voltage (get the lower) for 5 seconds.	$\Delta R \leq \pm (2\%R_0 + 0.05\Omega)$
耐焊接热 Resistance to soldering heat	在350±10℃的锡炉中浸入2~3秒。Immerse into the 350±10℃ tin stove for 2~3 seconds.	$\Delta R \leq \pm (1\%R_0 + 0.05\Omega)$
可焊性 Solderability	在245±3℃锡炉中浸入2~3秒。Immerse into the 245±3℃ 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℃时放置30分钟,然后在+25℃时放置10~15分钟,然后再在+275℃时放置30分钟,然后在+25℃时放置10~15分钟,共循环5次。At -55℃ for 30 min, then at +25℃ for 10~15 min, then at +275℃ for 30 min, then at +25℃ for 10~15 min, total 5 cycles.	$\Delta R \leq \pm (1\%R_0 + 0.05\Omega)$
耐湿负荷寿命 Load life in humidity	在温度为40±2℃,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℃ and 90~95% relative humidity.	$\Delta R \leq \pm (5\%R_0 + 0.05\Omega)$
耐温负荷寿命 Load life in heat	在70±2℃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℃.	$\Delta R \leq \pm (5\%R_0 + 0.05\Omega)$
不燃性 Nonflammability	分别按5、10、16倍额定功率加交流负荷5分钟。Respectively load AC voltage by 5, 10, 16 times rated power for 5 minutes.	不可有明显火焰 No visible flame

### ● 料号规则 Part No. Regulation:

SQP	10B	J	0	B001	10R00
产品名称 Product Name	功率 Power	精度 Tol.	特殊码 Special Code	成型 Forming	阻值 Ohm
水泥电阻器 Cement Resistors	01B = 1W 02B = 2W 03B = 3W 05B = 5W 07B = 7W 10B = 10W 10S = 10WS 15B = 15W 20B = 20W 25B = 25W 30B = 30W 40B = 40W 50B = 50W 80B = 80W 100 = 100W	F = ±1% G = ±2% J = ±1% K = ±10%		B001 = B M001 = M	0R100 = 0.1Ω 1R000 = 1Ω 4R700 = 4.7Ω 10K00 = 10KΩ
SQP SQZ SQH MS SQO SQT SQHG SQM SQS BKG BKM					