VER:01

规 格 承 认 书

SPECIFICATION FOR APPROVAL

客户 CUSTOMER ： 适用所有

品名 PRODUCT ： 水泥电阻器（SQP）

规格 TYPE ： SQP1W-50W

客户承认印 CUSTOMER APPROVED

广东翔胜电子科技有限公司
Guang Dong VICO Electronic Technology Co.,Ltd

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一式二份 翔胜一份 客户一份

出图	业务	审核	核准
DRAWING	SALES	AUDITING	APPROVED

翔胜电子技术品质部

编号:SQP2021

日期：2021年11月30日

ROHS

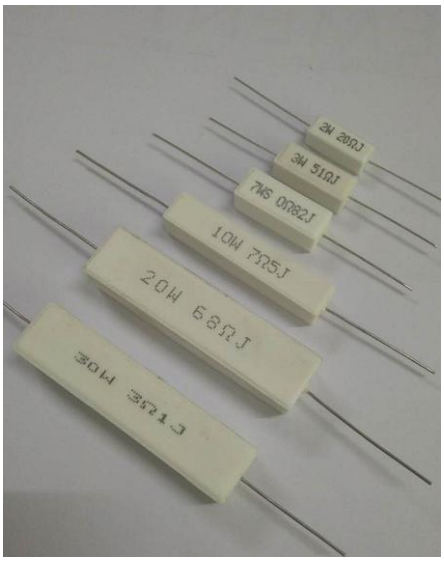
Reach

无卤
（F,Cl,Br,I）

CEMENT

CEMENT TYPE RESISTORS(WIREWOUND&FLUTING) 水泥电阻器

CEMENT(1W.2W.3W.5W.7WS、7W.10W.15W.20W.30W.50W)

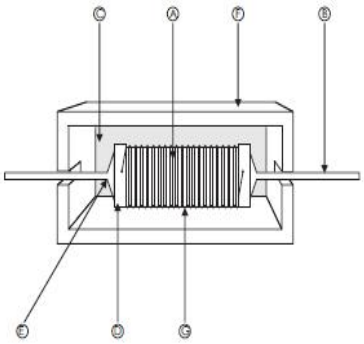


FEATURES 特点

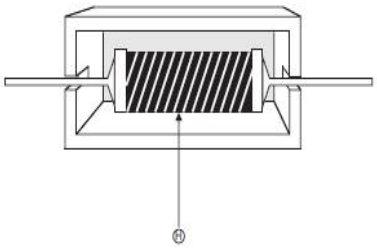
1 LOW NOISE
低杂音
2 INSULATION FULLY CAN BE USED IN P.C.B
使用于电路板，绝缘良好
3 USE FLUTING REPLACES WIREWOUND ,CAN MANUFACTURE THE HIGH RESISTANCE RANGE (OVER 100)
使用刻槽代替绕线，可制作高阻抗电阻。
4 SUPPER HEAT DISSIPATION;WITHOUT ANNUAL SHIFT ON RESISTANCE VALUE.
耐热性久，电阻系数直承直线变化
5 INSTANT OVERLOAD CAPABILITY;WITHOUT ANNUAL SHIFT ON RESISTANCE VALUE.
耐短时间过负载，阻值长时间无变化

CONSTRUCTION 结构图

1 CERAMIC CORE (HIGE THERMAL CONDUCTIVITY)
高品质陶瓷棒心
2 SOLDER PLATED COPPER LEAD WIRE
铜质导线
3 FIRE PROOF INSULATION CEMENT
不燃性绝缘材质
4 PRESS-FITTED END CAP
铁帽
5 WELDING (LONG RELIABILITY GUARANTEE)
信赖性良好的焊接
6 CERAMIC CASE
瓷质外盒
7 EWOUND RESISTORS.
绕线电阻。
8 FLUTING RESISTORS.
刻槽电阻。



WIRE WOUND CEMENT TYPE
绕线水泥电阻



FLUTING CEMENT TYPE
刻槽水泥电阻

TYPE DESIGNATION 品名构成

例： SQP5W-1K±5%-9P

SQP	5W	1K	±5%	9	P

品名	
SQP	SQP水泥电阻

额定功率	
1W	10W
2W	15W
3W	20W
5W	30W
7W	50W
7WS	

阻值范围
0Ω1-100KΩ

误差值
±10%:K
±5%:J
±2%:G
±1%:F

线径	
0:0.40CU	S:0.40CP
2:0.50CU	X:0.50CP
6:0.60CU	T:0.60CP
9:0.70CU	Q:0.70CP
A:0.75CU	
C:0.80CU	

形状	
散装	P

NOTE1注解: RATED VOLTAGE 额定电压 = √(POWER RATING 额定功率 * RESISTANCE VALUE 公称阻值)

CEMENT

CEMENT TYPE RESISTORS(WIREWOUND&FLUTING) 水泥电阻器

CHARACTERISTICS 特性项目	SPECIFICATIONS 规格值	TEST METHODS JIS C 5202 测试方法 JIS C 5202标准
DC RESISTANCE 直流阻抗值	J（±5%）	RESISTANCE VALUE TEST AT ROOM TEMPERATURE 25℃ 阻值测试在室温25℃
T.C.R温度系数	0.1Ω--0.5Ω ±1000PPM/℃ 0.5Ω以上 ±300PPM/℃ （按阻值高低而定）	$\frac{R2-R1}{R1(T2-T1)} \times 10^6 PPM/℃$ R1: RESISTANCE VALUE AT ROOM TEMPERATURE(T1) 常温（T1）阻抗值 R2: RESISTANCE VALUE AT ROOM TEMPERATURE +100℃（T2） 常温+100℃阻抗值
LOAD LIFE 负荷寿命	RESISTANCE CHANGE RATE IS ±(5%+0.05Ω)MAX WITH EVIDENCE OF RESISTOR DAMAGE. 阻抗值变化率±（5%+0.05Ω），不可有损伤	RESISTANCE CHANGE AFTER 1000H(1.5H ON,0.5H OFF)AT RATED VOLTAGE IN A HUMIDITY CHAMBER CONTROLLED AT40+/-2℃ AND 90-95% RELATIVE HUMIDITY.(when thetest voltage exceeds the working voltage,considerusing the working voltage) 温度40+/-2℃，相对湿度90-95%于恒温恒湿箱中，加额定直流电压测试1.5小时停止0.5小时，连续1000小时。（当实验电压超过最高使用电压，采用最高使用电压）
	RESISTANCE CHANGE RATE IS ±(5%+0.05Ω) MAX WITH NO EVIDENCE OF RESISTOR DAMAGE. 阻抗值变化率（5%+0.05Ω）以内，电阻器不可有损伤	RESISTANCE CHANGE AFTER 1000H OPERATING AT RATED VOLTAGE WITH DUTY CYCLE OF 1.5H ON 0.5H OFF AT 70℃±2℃(when thetest voltage exceeds the working voltage,considerusing the working voltage) 温度70+/2℃，加额定直流电压测试1.5小时停止0.5小时，连续1000小时（当实验电压超过最高使用电压时，采用最高使用电压）
SHORT TIME OVER LOAD 短时间过负荷	±(2%+0.05Ω)	RESISTANCE CHANGE AFTER THE APPLICATION OF APOTENTIAL 2.5 T RATED VOLTAGE FOR 5 SE(when the test voltage exceeds the maximum overload,consider using the maximum overload voltage) 额定电压X2.5倍，测试5秒（当实验电压超过最高过负载时，采用最高过负载电压）
PULSE OVER LOAD 断续过负荷	RESISTANCE CHANGE RATE IS ±(2%+0.05Ω)MAX,WITH NO EVIDENCE OF RESISTOR DAMAGE 阻抗值变化率±(2%+0.05Ω)以内，电阻器不可有损伤	RESISTANCE CHANGE AFTER 10000C(1SEC ON,25SEC OFF)AT 4T RATED VOLTAGE (AC)when the test voltage exceeds the maximam overload,consider using the maxmum overload voltage) 额定电压*4倍（交流电压），测试1秒停止25秒，测试10000次。（当实验电压超过最高过负荷电压，采用最高过负荷电压）
HUMIDITY 耐湿性	RESISTANCE CHANGE RATE IS±(1%+0.05Ω)MAX,WITH NO EVIDENCE OF RESISTOR DAMAGE 阻抗值变化率±(1%+0.05Ω)以内，电阻器不可有损伤	RESISTANCE CHANGE AFTER 240H EXPOSURE IN A HUMIDITY TEST CHAMBER CONTROLLED AT 40±2℃ AND 90-95% RELATIVE HUMIDITY 温度 40±2℃ ，相对湿度90-95%于恒湿箱中不加电压连续放置240小时
INSULATION RESISTANCE 绝缘阻抗	>100MΩ	
ELECTRIC WITHSTANDING VOLTAGE 绝缘耐电压	NO EVIDENCE OF FLASH OVER MECHANICAL DAMAGE ARCING OR INSULATION BREAKDOWN. 浆料不可烧损，绝缘不可破坏	ELECTRIC RESISTANCE BOTH ENDS THE CONJUNCTION LINE PUT ON THE METALS V TYPE THE SLOT, ACCORDING TO THE ELECTRIC VOLTAGE PROVISION OF THE CHARACTERISTIC WATCH 60 SECONDS INFLICTION 电阻两端导线置于金属V型槽上，依特性表之电压规定施加60秒
TEMPERATURE CYCLING 温度循环	RESISTANCE CHANGE RATE IS ±(1%+0.05Ω) MAX, WITH NO EVIDENCE OF RESISTOR DAMAGE. 阻抗值变化率±（1%+0.05Ω） 以内，电阻器不可有损伤	STEP 步骤、 / TEMPERATURE 温度 / TIME(MIN)放置时间 1 / -55℃±2℃ / 30 2 / ROOM TEMP室温 / 10-15 3 / 85℃±2℃ / 30 4 / ROOM TEMP室温 / 10-15
RESISTANCE TO SOLDERING HEAT 耐热性	RESISTANCE CHANGE RATE IS ±(2%+0.05Ω) MAX, WITH NO EVIDENCE OF RESISTOR DAMAGE. 阻抗值变化率±（1%+0.05Ω） 以内，电阻器不可有损伤	PUT THE LEAD LINE OF RESISTANCE INTO THE SOLDERING ABOUT 3.2 TO 4.8MM PIEASE TAKE IMPLEMENTATION ON THE BASISO OF THE TABLE BELOW 将电阻两端导线浸入锡炉约3.2至4.8MM依下表规定实施 TEMPERATURE温度 / DIP TIME放置时间 350℃±10℃ / 3±0.5 SEC 260℃±5℃ / 10±1.0 SEC
EFFECT OF SOLDERING 焊接影响		±(2%+0.05Ω)
LNCOMBUSTIBJLITY 不燃性	EX 16TIMES V 5MIN	

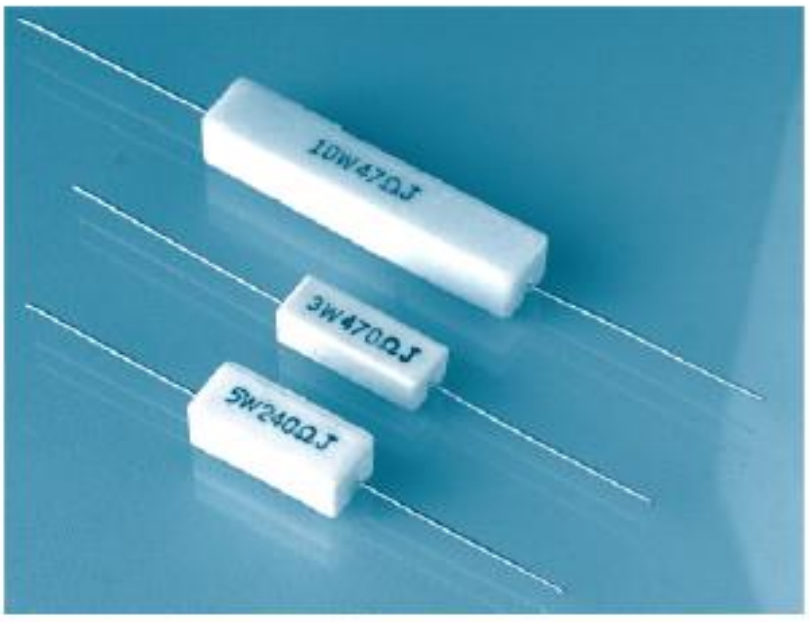
CEMENT

CEMENT TYPE RESISTORS(WIREWOUND&FLUTING) 水泥电阻器

POWER CHARACTERISTIC 电力特性

ITEM 项目 / POWER PATED 额定功率		1W	2W	3W	5W	7WS	7W	10W	15W	20W	30W	50W
MAX WORKING VOLTAGE 最高使用电压		300V	350V	350V	500V	500V	500V	750V	750V	750V	750V	750V
MAX OVERLOAD VOLTAGE 最高过负荷电压		600V	700V	700V	700V	700V	1000V	1000V	1000V	1000V	1000V	1000V
MAX INTERMITTENCE OVER LOAD VOLTAGE 最高断续过负荷		1000V	1000V	1000V	1000V	1000V	1000V	1500V	1500V	1500V	1500V	1500V
ELECTRIC WITHSTANDING VOLTAGE 绝缘耐电压		1000V	1000V	1000V	1000V	1000V	1000V	1000V	1000V	1000V	1000V	1000V
RESISTANCE TOLERANCE 阻抗误差值		J（±5%）										
		WIRWOUND TYPE 绕线形式										
RANGE(OHM) 阻抗值范围	MIN	0.1Ω	0.1Ω	0.1Ω	0.1Ω	0.1Ω	0.1Ω	0.13Ω	0.13Ω	0.18Ω	0.2Ω	0.36Ω
	MAX	220Ω	300Ω	360Ω	360Ω	360Ω	680Ω	820Ω	820Ω	910Ω	1K2Ω	15KΩ
		FLUTING TYPE 刻槽形式										
	MIN	301Ω	301Ω	301Ω	301Ω	301Ω	301Ω	301Ω	301Ω	501Ω	501Ω	501Ω
	MAX	47K	47K	47K	47K	47K	47K	47K	47K	100K	100K	100K

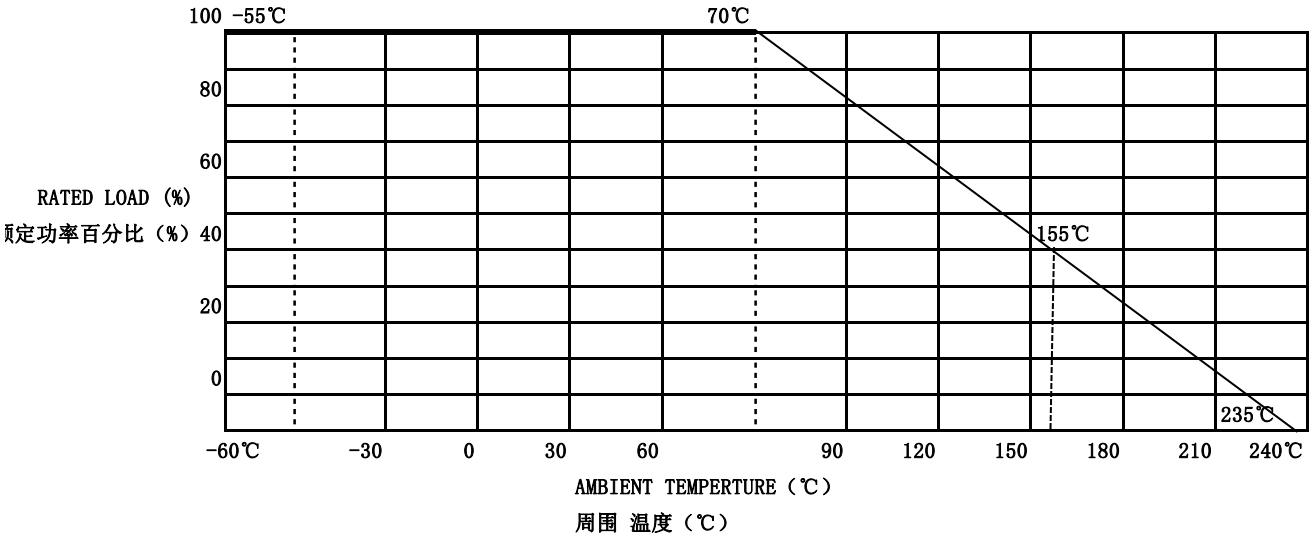
SQP



CEMENT

CEMENT TYPE RESISTORS(WIREWOUND&FLUTING) 水泥电阻器

POWER DERATING CURVE 负载衰减曲线



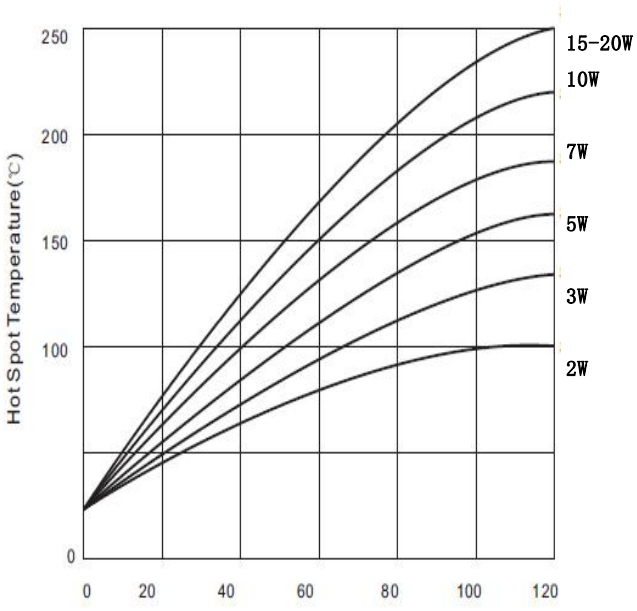
NOTE注解：

1 RATED AMBIENT TEMPERATURE :70℃
额定周围温度：70℃

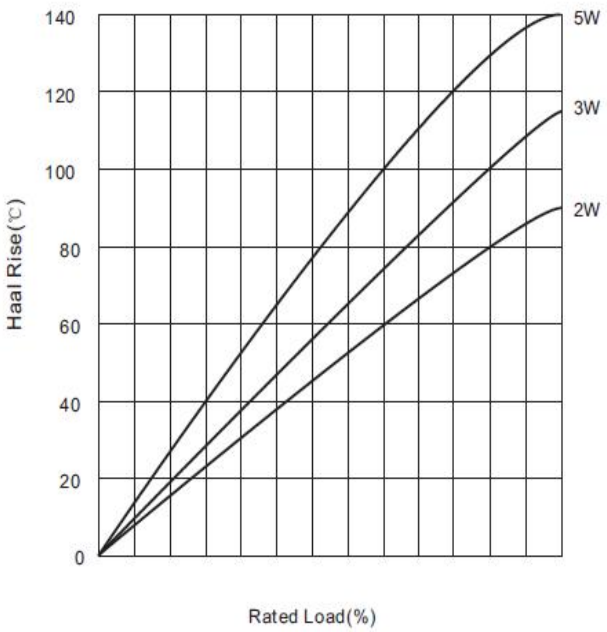
2 OPERATING TEMPERATURE RANGE:-55℃～+155℃
使用温度范围：-55℃～+155℃

3 FOR RESISTORS IPERATED IN AMBIENT TEMPERATURE OVER 70℃,POWER RATING SHALL BE DERATED IN A
WITH THE FIGURE
周围温度70℃以上使用时，根据降功率曲线将减轻额定功率

温度上升曲线 TEMPERTURE RISE



热上升曲线 HEAT RISE CHART



CEMENT

CEMENT TYPE RESISTORS(WIREWOUND&FLUTING)　水泥电阻器

SQP

TYPE 品名	DIMENSIONS(mm)尺寸				
	L1	W±1.0	H±1.0	Φd±0.05	L2±3.0
1W	14±1.0	6	6	0.50	23
2w	18±1.0	7	7	0.60	26
3W	22±1.0	8	8	0.60	24
5W	22±1.0	10	10	0.70	30
7WS	22±1.0	10	10	0.70	30
7W	35±1.0	10	10	0.70	33
10W	48±1.0	10	10	0.75	33
15W	48±1.0	12	12	0.75	33
20W	60±2.0	14	14	0.75	33
30W	75±2.0	18	19	0.75	33
50W	90±2.0	19	19	0.75	33

