

承 认 书
Approval Sheet for
水泥电阻器
Cement Resistors



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制程说明书

Specifications sheets for products

switch electronics limited.

JUNE1th,2016

谨提出固定电阻器之承认书, 恭请检讨并惠以承认为禱.

We prudently submit our fixed resistance specification for your inspection & discussion, look forward your kind acknowledgement.

接受栏 Receipt column

承认规格Specifications:

RX5W ± 5%

M

系列

接受 Receipt		审核 Checked		发行 Issued	
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承 认
Acknowledged by



审 核
Checked



批 准
Approve



发文号: SWI002-16060110426

PosNo:SWI002-16060110426

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CEMENT TYPE RESISTORS

水泥型电阻器

水泥型电阻器

CEMENT (5W)

CEMENT TYPE RESISTORS

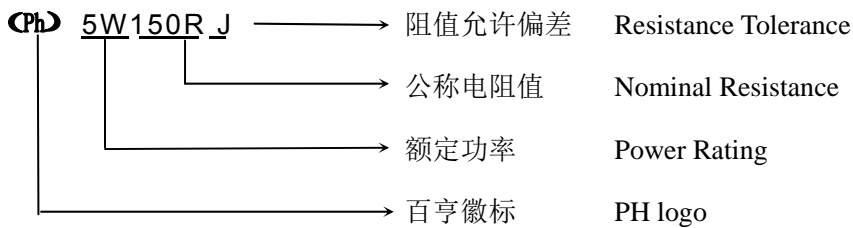
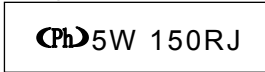
STANDARD TYPE (5W)

品名标识 PRODUCT MARKING:

(在水泥电阻瓷壳正面标注百亨徽标、功率、阻值、精度)

At the marks of PH logo in cement resistance porcelain shell face and kind, power, resistance, precision.

e. g.



注：J 表示精度 $\pm 5\%$ 。

Note: The J shows that precision $\pm 5\%$.

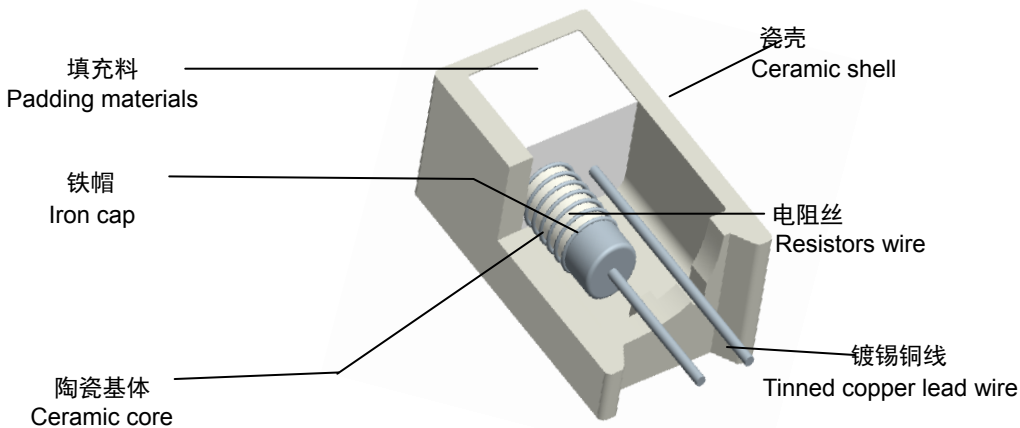
● FEATURES

- ◎ LOW NOISE.
- ◎ INSULATION IS GOOD TO BE USED IN P.C.B.
- ◎ INSTANT OVERLOAD CAPABILITY; WITHOUT ANNUAL SHIFT ON RESISTANCE VALUE.
- ◎ SUPER HEAT DISSIPATION; SMALL LINEAR TEMPERATURE COEFFICIENT.

● 特点

- ◎ 杂音低。
- ◎ 使用于电路板绝缘度好。
- ◎ 耐短时间过负载, 阻值长时间无变化。
- ◎ 耐热性优, 电阻温度系数呈直线变化。

● CONSTRUCTION 结构图



水泥电阻
CEMENT TYPE

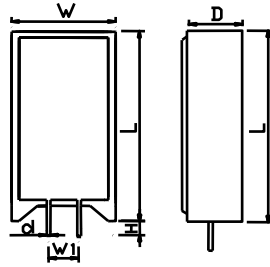
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CEMENT TYPE RESISTORS

水泥型电阻器

外形尺寸 DIMENSIONS

M 型 (M TYPE):

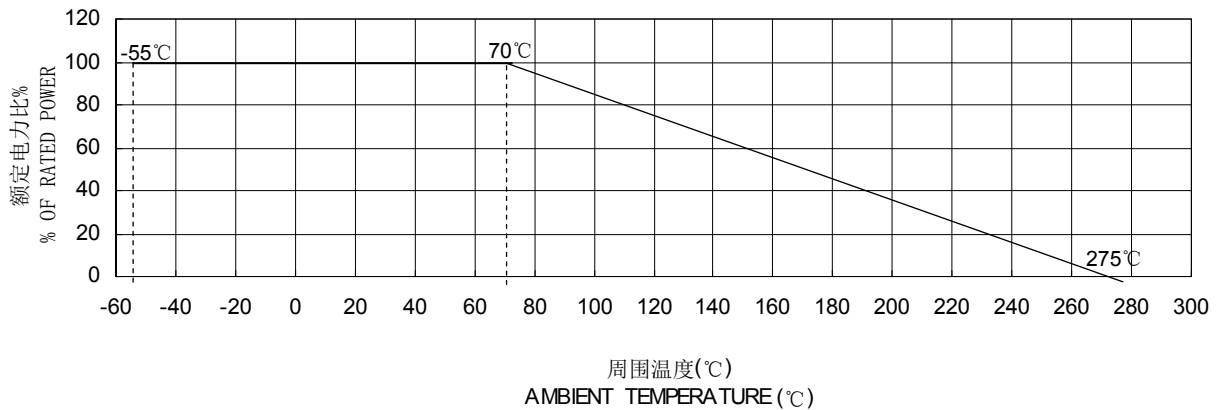


品名 PART NO	尺寸 (MM) DIMENSIONS (MM)						RESISTANCE RANGE(Ω)
	W±1	D±1	L±1.5	H±0.5	W1±1	d±0.05	
5W	13	10	25.5	4	5	0.78	0.1~3K3

性能 PERFORMANCE:

项目 ITEM	额定功率 POWER RATED	5W
最高使用电压 MAX WORKING VOLTAGE		\sqrt{PR} 或 350V 取较小者 \sqrt{PR} Or 350V Get the lower voltage
最高过负荷电压 MAX OVERLOAD VOLTAGE		$\sqrt{10PR}$ 或 600V 取较小者 $\sqrt{10PR}$ Or 600V Get the lower voltage
耐电压 DIELECTRIC WITHSTANDING VOLTAGE		1000V (AC)
阻抗误差值 RESISTANCE TOLERANCE		J±5%

负载轻减曲线 POWER DERATING CURVE



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CEMENT TYPE RESISTORS

水泥型电阻器

性能测试方法 PERFORMANCE TEST METHODS:

特性项目 CHARACTERISTICS	规格值 SPECIFICATIONS	测试方法 TEST METHODS															
直流阻抗值 DC RESISTANCE JIS-C-5202 5.1	J±5%	室温 25°C AT 25°C															
温度特性 TEMPERATURE COEFFICIENT JIS-C-5202 5.2	±300PPM/°C	$\frac{R2-R1}{R1(T2-T1)} \times 10^6$ (PPM/°C) R1:常温(T1)阻抗值 RESISTANCE VALUE AT ROOM TEMPERATURE(T1) R2:常温+100°C(T2)阻抗值 RESISTANCE VALUE AT ROOM TEMPERATURE +100°C(T2)															
耐电压 DIELECTRIC WITHSTANDING VOLTAGE JIS-C-5202 5.7	涂装不可烧损,绝缘不可破坏 NO EVIDENCE OF FLASHOVER MECHANICAL AMAGE,ARCING OR INSULATION BREAKDOWN.	电阻两端导线置于金属V型槽上依特性表之电压规定 印加 60 秒 RESISTORS SHALL BE CLAMPED IN THE TROUGH OF A 90° METALLIC V-BLOCK AND SHALL BE TESTED AT SPECIFIED IN THE ABOVE LIST FOR 60 SECONDS.															
绝缘阻抗 INSULATION RESISTANCE JIS-C-5202 5.6	1000MΩ MIN	以 DC 500V 测试待测体于 V 形槽上之导线及其表面 涂装印加 60 秒 WITHSTANDING TEST AND SHALL BE MEASURED AT DC 500V. RESISTOR SHALL BE PREPARED AC SAME METHOD OF DIELECTRIC.															
温度循环 TEMPERATURE CYCLING JIS-C-5202 7.4	$\Delta R \leq \pm(1\%R_0 + 0.05\Omega)$	依下表所规定之温度连续 5 次 FIVE TIMES ON THE TEMPERATURE AS THE TABLE. <table border="1"><thead><tr><th>步骤 STEP</th><th>温度 TEMPERATURE</th><th>放置时间 TIME(MIN)</th></tr></thead><tbody><tr><td>1</td><td>-25°C±3°C</td><td>30</td></tr><tr><td>2</td><td>ROOM TEMP</td><td>10-15</td></tr><tr><td>3</td><td>85°C±2°C</td><td>30</td></tr><tr><td>4</td><td>ROOM TEMP</td><td>10-15</td></tr></tbody></table>	步骤 STEP	温度 TEMPERATURE	放置时间 TIME(MIN)	1	-25°C±3°C	30	2	ROOM TEMP	10-15	3	85°C±2°C	30	4	ROOM TEMP	10-15
步骤 STEP	温度 TEMPERATURE	放置时间 TIME(MIN)															
1	-25°C±3°C	30															
2	ROOM TEMP	10-15															
3	85°C±2°C	30															
4	ROOM TEMP	10-15															
耐湿性 HUMIDITY JIS-C-5202 7.5	$\Delta R \leq \pm(5\%R_0 + 0.1\Omega)$	温度 40±2°C,相对湿度 90-95%于恒温恒湿箱中不加 电压,连续放置 1000 小时 TEMPERATURE RESISTANCE CHANGE AFTER A 1000 HOURS EXPOSURE IN A HUMIDITY TEST CHAMBER CON-TROLLED AT 40±2°C AND 90-95%RELATIVE HUMIDITY.															

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CEMENT TYPE RESISTORS

水泥型电阻器

特性项目 CHARACTERISTICS	规格值 SPECIFICATIONS	测试方法 TEST METHODS						
短时间过负荷 SHORT TIME OVERLOAD	$\Delta R \leq \pm(2\%R_0 + 0.05\Omega)$	1~4W ($U=\sqrt{5PR}$), 5~20W($U=\sqrt{10PR}$)或 2 倍 元件极限电压(取较小者)测试 5 秒. 1~4W ($U=\sqrt{5PR}$), 5~20W($U=\sqrt{10PR}$) OR 2 MAX VOLTAGE (CHOOSE THE LOWER VOLTAGE)FOR 5 SECS.						
湿度寿命 LOAD LIFE IN HUMIDITY JIS-C-5202 7.9	$\Delta R \leq \pm(5\%R_0 + 0.1\Omega)$	温度 $40 \pm 2^\circ\text{C}$,相对湿度 90-95%于恒温箱中, 加额定直流电压($U=\sqrt{PR}$)或元件极限电压(取 较小者)测试 1.5 小时, 停止 0.5 小时连续 1000 小时.RESISTANCE CHANGE AFTER 1000 HOURS (1.5 HRS ON, 0.5 HRS OFF) AT RCWV($U=\sqrt{PR}$) OR COMPONENT MAX VOLTAGE (CHOOSE THE LOWER VOLTAGE) IN A HUMIDITY CHAMBER CONTROLLED AT $40^\circ\text{C} \pm 2^\circ\text{C}$ AND 90-95% RELATIVE HUMIDITY.						
室温寿命 LOAD LIFE JIS-C-5202 7.10	$\Delta R \leq \pm(5\%R_0 + 0.1\Omega)$	室温条件下,以额定电压($U=\sqrt{PR}$)或元件极限 电压(取较小者)测试 1.5 小时,停止 0.5 小时测 试 1000 小时.PERMANENT RESISTANCE CHANGE AFTER 1000 HOURS OPERATING AT RCWV ($U= \sqrt{PR}$) OR COMPONENT MAX VOLTAGE (CHOOSE THE LOWER VOLTAGE) WITH DUTY CYCLE OF 1.5 HOURS ON,0.5 HOURS OFF AT $25^\circ\text{C} \pm 2^\circ\text{C}$.						
耐热性 RESISTANCE TO SOLDERING HEAT JIS-C-5202 6.4	$\Delta R \leq \pm(1\%R_0 + 0.05\Omega)$	将电阻两端导线浸入锡炉约 3.2 到 4.8MM 依 下表规定实施.DIP THE LEADS OF THE RESISTOR INTO SN STOVE THE DEPTH IS 3.2~4.8MM, THE TEMPERATURE AND THE TIME AS THE TABLE. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>TEMPERATURE</th> <th>DIP TIME</th> </tr> </thead> <tbody> <tr> <td>$350^\circ\text{C} \pm 10^\circ\text{C}$</td> <td>$3.0 \pm 0.5 \text{ SEC}$</td> </tr> <tr> <td>$260^\circ\text{C} \pm 5^\circ\text{C}$</td> <td>$10 \pm 1 \text{ SEC}$</td> </tr> </tbody> </table>	TEMPERATURE	DIP TIME	$350^\circ\text{C} \pm 10^\circ\text{C}$	$3.0 \pm 0.5 \text{ SEC}$	$260^\circ\text{C} \pm 5^\circ\text{C}$	$10 \pm 1 \text{ SEC}$
TEMPERATURE	DIP TIME							
$350^\circ\text{C} \pm 10^\circ\text{C}$	$3.0 \pm 0.5 \text{ SEC}$							
$260^\circ\text{C} \pm 5^\circ\text{C}$	$10 \pm 1 \text{ SEC}$							
焊锡性 SOLDERABILITY JIS-C-5202 6.5	焊锡覆盖面积 95%以上 95% COVERAGE MIN.	锡炉温度: $260 \pm 5^\circ\text{C}$ 浸炉时间: $2 \pm 0.5 \text{ SEC}$ TEST TEMPERATURE OF SOLDER: $260 \pm 5^\circ\text{C}$ DWELL TIME IN SOLDER: $2 \pm 0.5 \text{ SEC}$						
不燃性 NONINFLAMMAB-ILI TY	不可燃烧 NONINFLAMMABLE	分别按 5.10.16 倍额定功率加交流负荷 5 分钟 LOAD 5 MIN ACCORDING TO 5 TIME 10 TIME 16 TIME POWER RATED AND A.C						

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CEMENT TYPE RESISTORS

水泥型电阻器

包装方式 PACKING:

型号 TYPE	数 量 Q'TY(PCS)	功率 POWER	5W
M 型	单元包装数 CELL PACKING QTY		88
	整箱数 FULL BOX QTY		1760