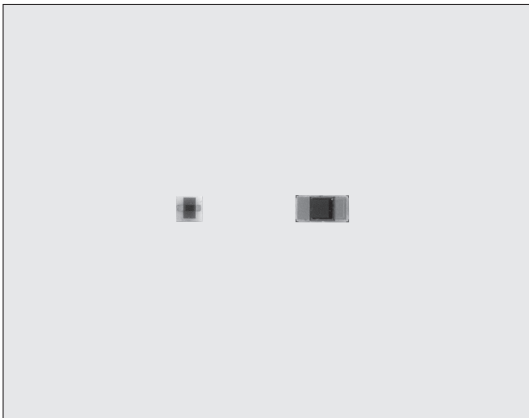
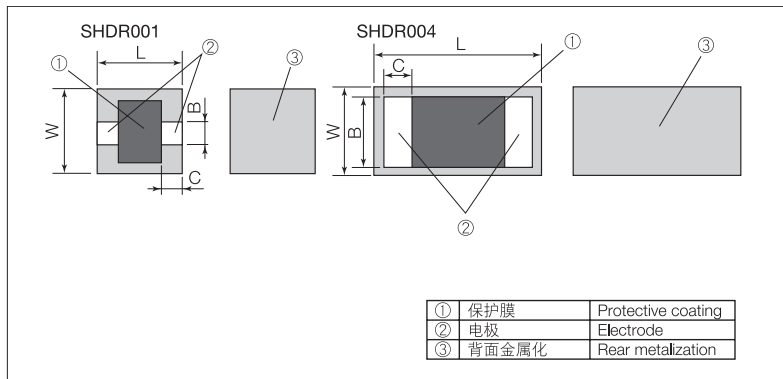


## SHDR 高频率用片式电阻器 Microwave Thin Film Chip Resistors



### ■ 结构图 Construction



### ■ 特点 Features

- SHDR是欧盟RoHS对应品。
- SHDR meet EU-RoHS requirements
- 良好频率特性直到15GHz: 反射系数-15dB以下 (SHDR001, 50Ω的代表值)。
- 安装是引线结合。
- 适用于高频电路的终端电阻。
- Good frequency characteristics up to 15GHz: Reflection coefficient not more than -15dB (Representative value of SHDR001, 50Ω)
- Wire-bonding form mounting.
- Most suitable for terminal resistors for high frequency circuits.

### ■ 用途 Applications

- 高速大容量光通信的光存储体、微波集成电路、电压控制晶体振荡器等。
- Optical Modules of High Speed Large Volume Optical Communications, Microwave Integrated circuits, VCXO, etc.

### ■ 外形尺寸 Dimensions

型号 Type	尺寸 Dimensions (mm)					Weight (g) (1000pcs)
	L±0.05	W±0.05	C±0.02	B±0.02	t±0.05	
SHDR001	0.5	0.5	0.1	0.12	0.2	0.192
SHDR004	1.0	0.5	0.22	0.4	0.2	0.384

### ■ 品名构成 Type Designation

实例 Example

SHDR

SHDR	001	G	K	500	J
品种 Product Code	尺寸 Size	端子表面材质 Terminal Surface Material	包装 Packaging	公称电阻值 Nominal Resistance	阻值允许偏差 Resistance Tolerance
	001:0.5×0.5mm 004:1.0×0.5mm	G: Au	K: 切屑盘 K: Chip Tray	3digits	J: ±5%

预知关于此产品含有的环境有害物质详情(除EU-RoHS以外), 请与我们联系。  
编带细节请参考卷末附录C。

Contact us when you have control request for environmental hazardous material other than the substance specified by EU-RoHS.

For further information on taping, please refer to APPENDIX C on the back pages.

### ■ 额定值 Ratings

SHDR

型号 Type	额定功率 Power Rating	电阻值范围 Resistance Range (Ω)	电阻温度系数 T.C.R. (×10 <sup>-6</sup> /K)	最高过载电压 Max. Overload Voltage
SHDR001	0.031W	22~390 (E12) & 50, 75	-100±50	J: ±5%
SHDR004	0.062W	22~470 (E12) & 50, 75		
	0.031W	560~1k (E12) & 500		

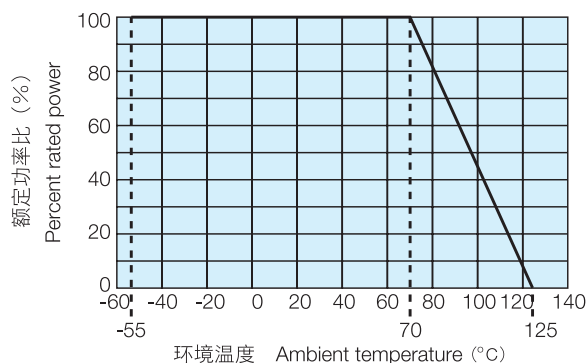
额定环境温度 Rated Ambient Temperature : +70℃

使用温度范围 Operating Temperature Range: -55℃~+125℃

额定电压是√额定功率×公称电阻值所算出的值或表中最高使用电压两者中小的值为额定电压。

Rated voltage = √Power Rating×Resistance value or Max. working voltage, whichever is lower.

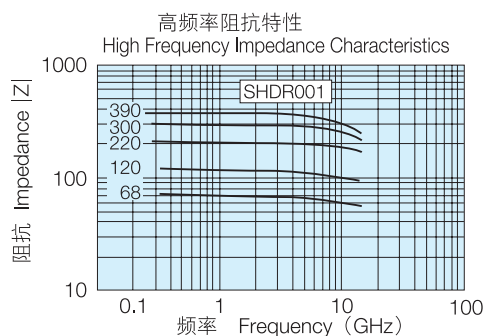
### SHDR负荷特性曲线 Derating Curve



在环境温度70℃以上使用时，应按照上图负荷特性曲线，减小额定功率。

For resistors operated at an ambient temperature of 70°C or above, a power rating shall be derated in accordance with the above derating curve.

### SHDR频率特性 Frequency Characteristics



### 性能 Performance

#### SHDR

试验项目 Test Items	标准值 Performance Requirements $\Delta R \pm$ (%+0.05 $\Omega$ )	试验方法 Test Methods
电阻值 Resistance	在规定的允许偏差内 Within specified tolerance	25°C
电阻温度系数 T.C.R.	在规定值以内 Within specified T.C.R.	+25°C/+65°C
在70°C时的耐久性 Endurance at 70°C	1	70°C额定功率断续通电 1.5小时ON、0.5小时OFF的周期 Continuous turning on electricity of rated power, 1000h 1.5h ON/0.5h OFF cycle
耐湿负荷 Moisture resistance	1	60°C、95%RH额定功率断续通电 1.5小时ON、0.5小时OFF的周期 Continuous turning on electricity of rated power, 1000h 1.5h ON/0.5h OFF cycle
温度突变 Rapid change of temperature	1	-55°C (30min.) / +125°C (30min.) 100 cycles

### 使用注意事项 Precautions for Use

- 产品受到含有人的汗和唾液等的钠 (Na<sup>+</sup>)、氯 (Cl<sup>-</sup>) 等离子性杂质污染时，已确认会引发电蚀。因此，在保管、装载或使用时应注意防止污染。并且，污染得到确认时，应用纯水等清洗干燥，注意不使离子性物质残留。
- When the components are polluted by ionic impurities like sodium (Na<sup>+</sup>), chlorine (Cl<sup>-</sup>) etc. included in perspiration and saliva, it leads to electric erosion. Avoid the pollution when storage, mounting and using. Consider not to remain ionic substances on the components. Wash by pure water etc. and dry them when you find pollution.