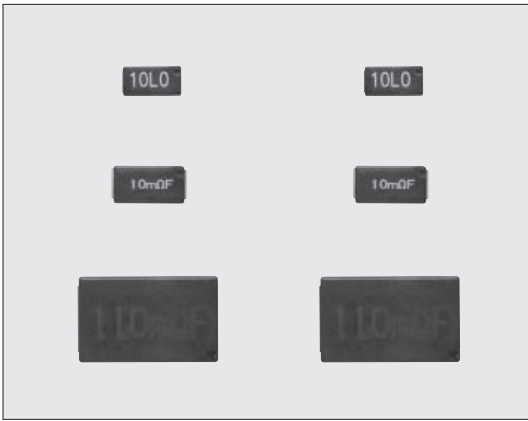


SLW07 · SLW1 · SLN3 | 电流检测用片式电阻器 Current Sensing Chip Resistors

电流检测用片式电阻器
Current Sensing Chip Resistors



外观颜色: 黑色 Coating color: Black

■ 特点 Features

- 是小型、超低电阻值 (5mΩ ~)、高精度 (±0.5%)、SMD形状的电流检测用片式电阻器。
- 是阻燃性树脂 (UL94 V-0) 模压密封型。
- 由于是模压成形, 尺寸精度高, 装载性、耐冲击性好。
- 由于是金属端子电极, 端子强度、焊接性优异。
- 是金属板端子电极结构, 吸收热膨胀收缩。
- 对应波峰焊、回流焊、烙铁焊接。
- 端子无铅品, 符合欧盟RoHS。电极、电阻膜层、玻璃中所含的铅玻璃不适用欧盟RoHS指令。
- AEC-Q200相关数据已取得。
- SMD type of small size, ultra-low resistance (5mΩ ~) and high accuracy (±0.5%) resistor for current sensing.
- Encapsulated with flame retardant resin molding. (UL94 V-0)
- Excellent dimension accuracy, mountability and shock-resistance due to molded products.
- Excellent terminal strength and solderability due to structure of a metal plate terminal electrode.
- Easy to absorb the thermal expansion and shrinkage because of a metal plate terminal structure.
- Suitable for flow, reflow and iron solderings.
- Products with lead free termination meet EU-RoHS requirements. EU-RoHS regulation is not intended for Pb-glass contained in electrode, resistor element and glass.
- AEC-Q200 qualified.

■ 用途 Applications

汽车	Automotive
笔记本电脑	Note PCs
电池组	Battery packs
AC适配器	AC Adapters
DC-DC换流器	DC-DC converters, etc.

■ 额定值 Ratings

型号 Type	额定功率 Power Rating	电阻值范围 ^{※2} Resistance Range (Ω) (E24)			电阻温度系数 ^{※3} T.C.R. (×10 ⁻⁶ /K)	额定端子部温度 Rated Terminal Part Temp.	使用温度范围 Operating Temp. Range	编带和包装数/卷 Taping & Qty/Reel (pcs) TE
		D: ±0.5%	F: ±1%	J: ±5%				
SLW07	1.0W	—	5m~100m	5m~100m	0~200: R≤10mΩ 0~150: R≥11mΩ	125°C	-55°C ~ +180°C	2,000
SLW1	1.5W	10m~100m	5m~100m	5m~100m	±180: R≤13mΩ ±100: R≥15mΩ	120°C		1,000
SLN3	3.0W	5m~110m	5m~110m	5m~110m	±110: R < 10mΩ ±75: R ≥ 10mΩ			

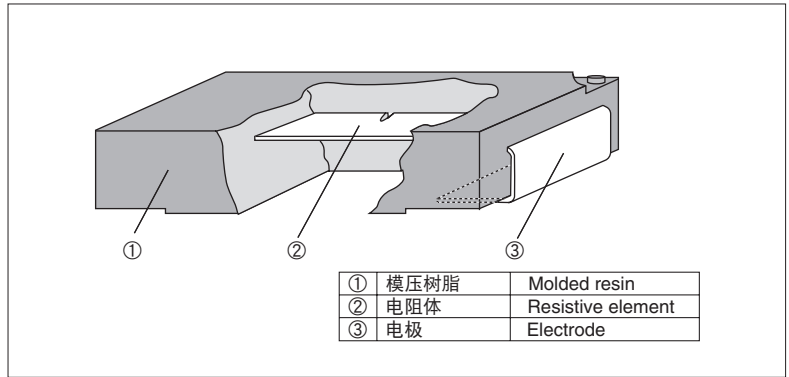
额定电压是√(额定功率×公称电阻值)所算出的值。

Rated voltage = √(Power Rating × Resistance value).

※2 在电阻值范围内, 5m、6m、7m、8m、9mΩ 都对应。Available for 5m, 6m, 7m, 8m and 9mΩ inside each resistance range.

※3 关于电阻温度系数为±50及±75×10⁻⁶/K的产品, 请您另行询问。Please ask separately us about T.C.R. (±50 and ±75×10⁻⁶/K).

■ 结构图 Construction



■ 品名构成 Type Designation

实例 Example

SL	1	T	TE	10L0	F
品种 Product Code	额定功率 Power Rating	端子表面材质 Terminal Surface Material	二次加工 Taping	公称电阻值 ^{※1} Nominal Resistance	阻值允许偏差 Resistance Tolerance
SL SLN	W07: 1.0W W1: 1.5W 3: 3.0W	T: Sn	TE: Plastic embossed BK: Bulk	D, F: 4 digits J: 3 digits	D: ±0.5% F: ±1% J: ±5%

※1

电阻值范围 (Ω) Resistance Value	3位显示 3 digits	电阻值范围 (Ω) Resistance Value	4位显示 4 digits
5m~9.1m	5L0~9L1	5m~9.1m	5L00~9L10
10m~91m	10L~91L	10m~91m	10L0~91L0
0.1~0.91	R10~R91	0.1~0.91	R100~R910

欲知关于此产品含有的环境负荷物质详情 (除EU-RoHS以外), 请与我们联系。编带细节参照卷末附录C。

The terminal surface material lead free is standard.

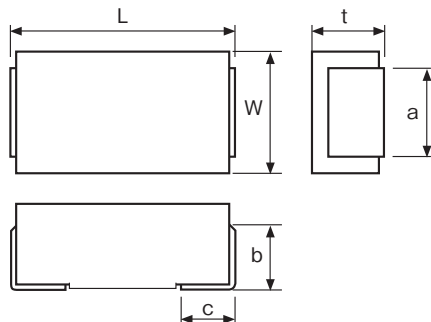
Contact us when you have control request for environmental hazardous material other than the substance specified by EU-RoHS.

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

■ 参考标准 Reference Standards

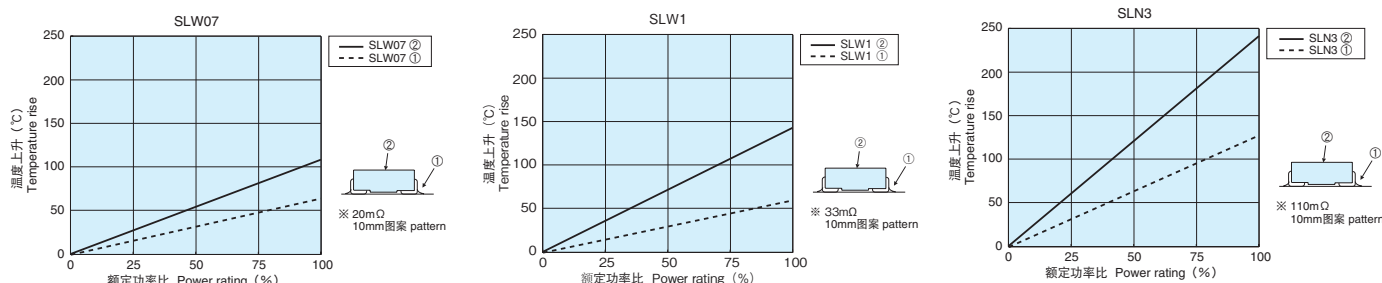
IEC 60115-1
JIS C 5201-1

■ 外形尺寸 Dimensions



型号 Type (Inch Size Code)	尺寸 Dimensions (mm)						Weight (g) (1000pcs)
	L±0.3	W±0.2	t±0.2	a±0.2	b±0.2	c	
SLW07 (2010)	5.0	2.5	1.7	2.0	0.9	1.2±0.3	45
SLW1 (2512)	6.3	3.1	1.9	2.4	1.2	1.2±0.3	90
SLN3 (4528)	11.5	7.0	2.4	5.5	1.6	2.55±0.4	500

■ 温度上升 Temperature Rise



表面温度上升，由于是用本公司测定条件测定的，根据使用状况、使用基板不同，数值也有不同，因此在使用时应另行询问。

Regarding the temperature rise, the value of the temperature varies per conditions and board for use since the temperature is measured under our measuring conditions. Please refer to us before use.

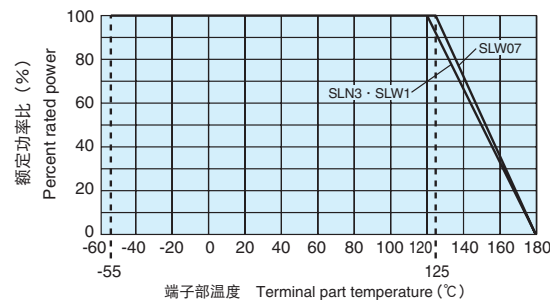
■ 性能 Performance

试验项目 Test Items	标准值 Performance Requirements ΔR±%		试验方法 Test Methods
	保证值 Limit	代表值 Typical	
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/+125°C
过载 (短时间) Overload (Short time)	1: SLW07, SLW1 0.5: SLN3	1: SLW07, SLW1 0.25: SLN3	SLW07: 3W施加5秒钟 3W for 5s SLW1: 5W施加5秒钟 5W for 5s SLN3: 10W施加5秒钟 10W for 5s
耐焊接热 Resistance to soldering heat	1: SLW07, SLW1 0.5: SLN3	1: SLW07, SLW1 0.5: SLN3	260°C±5°C, 10s±1s 260°C±5°C, 10s~12s
温度突变 Rapid change of temperature	1: SLW07, SLW1 0.5: SLN3	0.5: SLW07, SLW1 0.25: SLN3	-55°C (30min.) /+150°C (30min.) 100 cycles -55°C (15min.) /+150°C (15min.) 1000 cycles
耐湿负荷 Moisture resistance	2: SLW07, SLW1 0.5: SLN3	0.5: SLW07, SLW1 0.35: SLN3	40°C±2°C, 90~95%RH, 1000h, 1.5小时ON、0.5小时OFF的周期 1.5h ON/0.5h OFF cycle 85°C±2°C, 85%RH, 1000h, 0.3W
额定端子部温度的耐久性 Endurance of Rated Terminal part Temperature	2	1	Terminal part temp. : 125°C (SLW07) : 120°C (SLW1, SLN3) 1000h, 1.5小时ON、0.5小时OFF的周期 1.5h ON/0.5h OFF cycle
低温放置 Low temperature exposure	0.5	0.25	SLW07, SLW1: -55°C, 1h SLN3: -65°C, 24h

■ 使用注意事项 Precautions for Use

- 作为分流电阻使用时，应考虑和周围线圈的电磁感应后，配置模型。
- 对于50mΩ或以下的电阻值，焊接后的电阻值可能会根据焊盘图案的大小或焊锡量而变化。对设备进行设计时，请先确认电阻值下降、上升所造成的影响。
- In case of using the low ohm resistors as shunt resistors, please lay out a pattern considering the electromagnetic induction with surrounding inductors.
- In the resistance values of 50mΩ or under, the resistance value after soldering may change depending on the size of pad pattern or solder amount. Make sure the effect of decline/increase of resistance value before designing.

■ 负荷减轻特性曲线 Derating Curve



超过端子部温度使用时，请根据上图负荷减轻特性曲线减小额定功率后使用。
※有关使用方法，请参照卷首的“端子部温度负荷减轻特性曲线的说明”。
For resistors operated at a terminal part temperature of described for each size or above, a power rating shall be derated in accordance with derating curve.
※Please refer to “Introduction of the derating curves based on the terminal part temperature” on the beginning of our catalog before use.