



承认书 Acknowledgement

深圳市毫欧电子有限公司

编号:Ho20211117-01

客户名称 (Customer)	
产品名称 (Description)	贴片陶瓷电阻
产品型号 (Part Number)	HoRS2512-1W-0R-5%
产品编码 (Product Code)	

制作 (Writer)	黄永康	(受控章签章)
审核 (Checker)		
批准 (Approver)	郑志敏	
日期 (Date)	2021-11-17	



■ 承认书 Acknowledgement

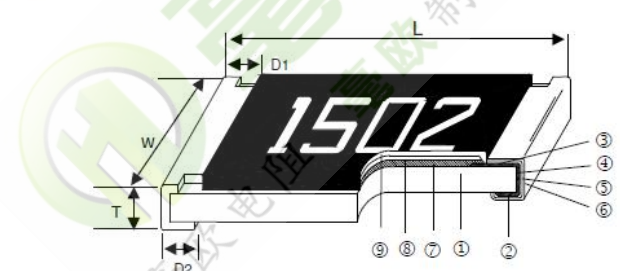
- 1、目的：通过本承认书对样品特性和检验标准的描述，与客户更好沟通，达成一致意见，避免因未充分沟通而引起的产品质量纠纷。
- 2、适用范围：本承认书适用于深圳市毫欧电子有限公司所提供样品、产品的特性及检验标准
- 3、订单关联：客户确认本承认书则认可与深圳市毫欧电子有限公司所有合同订单项下的物料规格型号与交货产品的一致性。如未收到异议或确认，本承认书于客户收到日起两周后默认生效。

■ 产品名称 Product Name: 贴片陶瓷电阻

■ 标称 Nominal: HoRS2512-1W-0R-5%

Ho	RS	2512	1W	0R	5%
Ho 毫欧电子	产品系列	封装	功率	阻值	精度

■ 产品尺寸 Product Size

项 目	参 数													
尺寸(mm)	L	W	T	D1	D2									
	6.35±0.1	3.10±0.15	0.55±0.1	0.6±0.25	0.5±0.20									
产品编码:	Construction  <table><tr><td>① Alumina Substrate</td><td>④ Edge Electrode (NiCr)</td><td>⑦ Resistor Layer (RuO₂/Ag)</td></tr><tr><td>② Bottom Electrode (Ag)</td><td>⑤ Barrier Layer (Ni)</td><td>⑧ Primary Overcoat (Glass)</td></tr><tr><td>③ Top Electrode (Ag-Pd)</td><td>⑥ External Electrode (Sn)</td><td>⑨ Secondary Overcoat (Epoxy)</td></tr></table>					① Alumina Substrate	④ Edge Electrode (NiCr)	⑦ Resistor Layer (RuO ₂ /Ag)	② Bottom Electrode (Ag)	⑤ Barrier Layer (Ni)	⑧ Primary Overcoat (Glass)	③ Top Electrode (Ag-Pd)	⑥ External Electrode (Sn)	⑨ Secondary Overcoat (Epoxy)
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备注														

■ 客户确认 Customer Approval

客户负责人签字确认		客户受控章确认
物料规格型号		
负责人签字		
确认时间		

■ 产品特点 **Features:**

陶瓷芯片，封体工艺，两端焊盘电镀，焊接性能良好

高可靠性，高过载能力，产品精度高。

使用温度范围较宽无感型设计，电感小于 10 纳亨

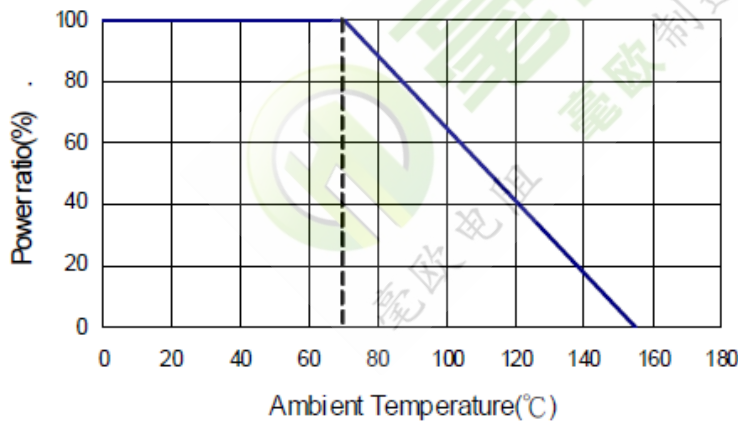
符合 ROHS 要求和无卤要求

■ 电气参数 **Electrical parameter**

额定功率 Rated Power at 70℃	1W
准确度等级 AccuracyClass	1%
电阻温度系数 T.C.R (ppm / °C)	±1500
工作温度范围 Operating Temperature Range	-55℃~+155℃

■ 功率下降曲线 **Power drop curve**

操作温度范围 - 55 ~+155 °C，电阻温度达到 70°C时降功率示意图



■ 额定电流计算公式 **The rated current is calculated by the following Formu**

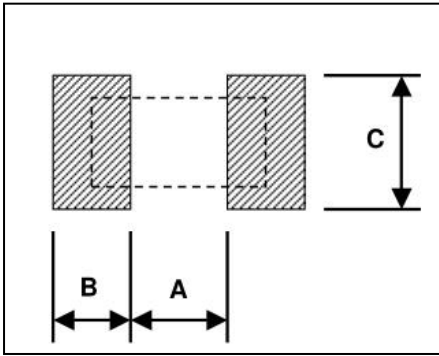
$$I = \sqrt{P/R}$$

I :Rated Current (A)

P:Rated Power (W)

R:Resistance Value (Ω)

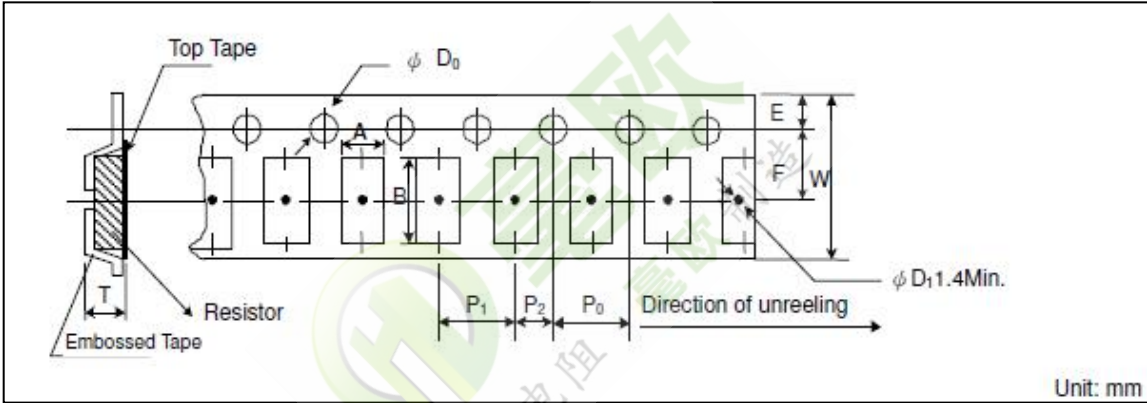
■ 建议焊盘尺寸 Recommended Solder Pad Dimension



单位: mm

产品阻值	A	B	C
0R	3.8	1.6	3.5

■ 彩带尺寸 Ribbon size



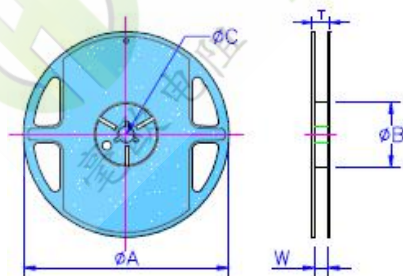
Unit: mm

Type	A	B	W	E	F	P0	P1	P2	D0	T
HoRS2512	3.5±0.2	6.7±0.2	12±0.3	1.75±0.1	5.5±0.05	4.0±0.1	4±0.05	2±0.05	Φ1.51+ 0.1/-0	1.2±0.05

■ 可靠性测试 Reliability Tests

Item	Requirement		Test Method
	Tol. $\leq 0.05\%$	Tol. $> 0.05\%$	
Temperature Coefficient of Resistance (T.C.R.)	As Spec.		+25/-55/+25/+125/+25°C
Short Time Overload	$\Delta R \pm 0.05\%$	$\Delta R \pm 0.2\%$	RCWV*2.5 or Max. overload voltage for 5 seconds
	$\Delta R \pm 0.2\%$ for high power rating		
Insulation Resistance	$> 1000\text{ M}\Omega$		Apply 100V _{DC} for 1 minute
Endurance	$\Delta R \pm 0.05\%$	$\Delta R \pm 0.2\%$	70±2°C, Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
	$> 7\text{k}\Omega$ $\Delta R \pm 0.5\%$		
	$\Delta R \pm 0.5\%$ for high power rating		
Damp Heat with Load	$\Delta R \pm 0.05\%$	$\Delta R \pm 0.3\%$	40±2°C, 90~95% R.H. Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
	$\Delta R \pm 0.5\%$ for high power rating		
Bending Strength	$\Delta R \pm 0.05\%$	$\Delta R \pm 0.2\%$	Bending amplitude 3 mm for 10 seconds
Solderability	95% min. coverage		245±5°C for 3 seconds
Resistance to Soldering Heat	$\Delta R \pm 0.05\%$	$\Delta R \pm 0.2\%$	260±5°C for 10 seconds
Dielectric Withstand Voltage	By Type		Max. overload voltage for 1 minute
Thermal Shock	$\Delta R \pm 0.05\%$	$\Delta R \pm 0.25\%$	-55°C~150°C, 100 cycles
Low Temperature Operation	$\Delta R \pm 0.05\%$	$\Delta R \pm 0.2\%$	1 hour, -65°C, followed by 45 minutes of RCWV
	$\Delta R \pm 0.5\%$ for high power rating		

■ 卷轴规格 Reel Specification



单位: mm

数量	ΦA	ΦB	ΦC	W	T
4k	178.5 ± 1.5	60	13 ± 1	13 ± 1	15.5 ± 1
8k	250 ± 1	62 ± 1	13 ± 1	12.5 ± 1	16.5 ± 1

■ 包装方式 Packing

盘装: 每盘/4K/8Kpcs