

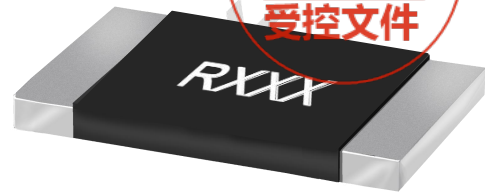
低阻值合金电流采样贴片电阻-YLRDS-2512系列

Low Resistance Metal Strip Chip Resistors-YLRDS-2512 series



业展电子
YEZHAN ELECTRONICS

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2026.08.21
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特征 Features

阻值范围 Resistance value	2~50mΩ
精度 Tolerance	±0.5%、±1%、±2%、±5%
功率 Power	2W、3W
温度系数 Temperature coefficient	±50ppm/°C
合金材质 Alloy material	M:CuMn、K:Karma
工作温度范围 Operating temperature range	-65°C~170°C
低电感 Low inductance	< 5nH (1MHz)
绝缘阻抗 Insulation resistance	≥220MΩ (DC 500V 1min)
耐压值 Withstand voltage	500V
符合AEC-Q200	AEC-Q200 qualified
符合RoHS要求	RoHS compliant

应用范围 Applications

电流采样	Current Sensing
过流保护	Over current protection
伺服电机控制电路	Servo motor control circuits
变频电源	Inverter power
电子控制系统	Electric control system
锂电池控制板	Li-battery management system

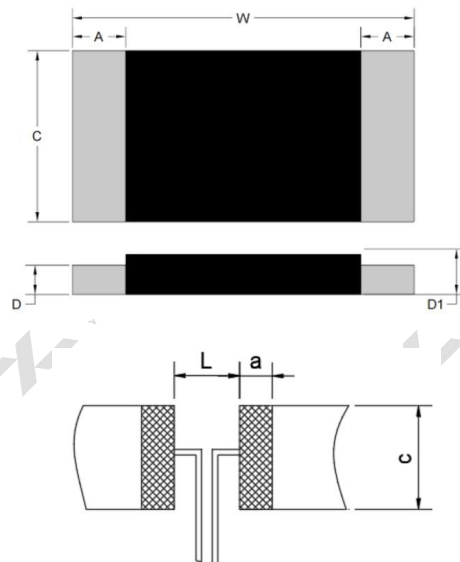
订购信息 Ordering Information

YLRDS	12	-3	-10	F
类型 Type	尺寸 Size	功率 Power	阻值 Resistance	精度 Tolerance
YLRDS	12: 2512	Unit: W 3:3W	Unit: mΩ 10: 10 mΩ	J: ±5% G: ±2% F: ±1% D: ±0.5%



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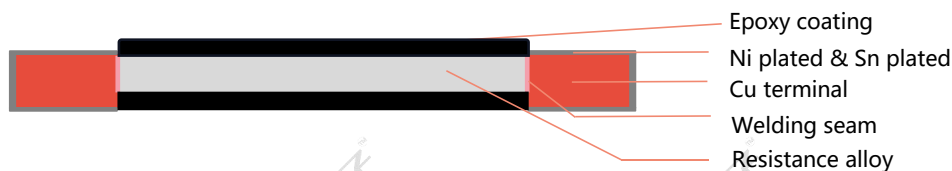
产品尺寸和推荐焊盘尺寸 Products & Recommend Pad Dimension



Unit: mm

Type	Resistance (mΩ)	W±0.2	C±0.2	A±0.2	D±0.1	D1±0.1	L	a	c
YLRDS12	2~50	6.35	3.2	1.0	0.55	0.85	4.0	2.1	4

产品结构图 Item Construction



标准电气规范 Standard Electrical Specifications

系列 Type	尺寸 Size	功率 Rated Power(W)	材料 Material	阻值 Resistance /mΩ	温漂 TCR① (ppm/°C)	精度 Resistance Tolerance (%)	工作温度 Operating Temperature (°C)
		P70°C					
YLRDS	2512	2W、3W	CuMn	2~4	±50	±0.5% ±1% ±2% ±5%	-65°C~170°C
			Karma	5~50			

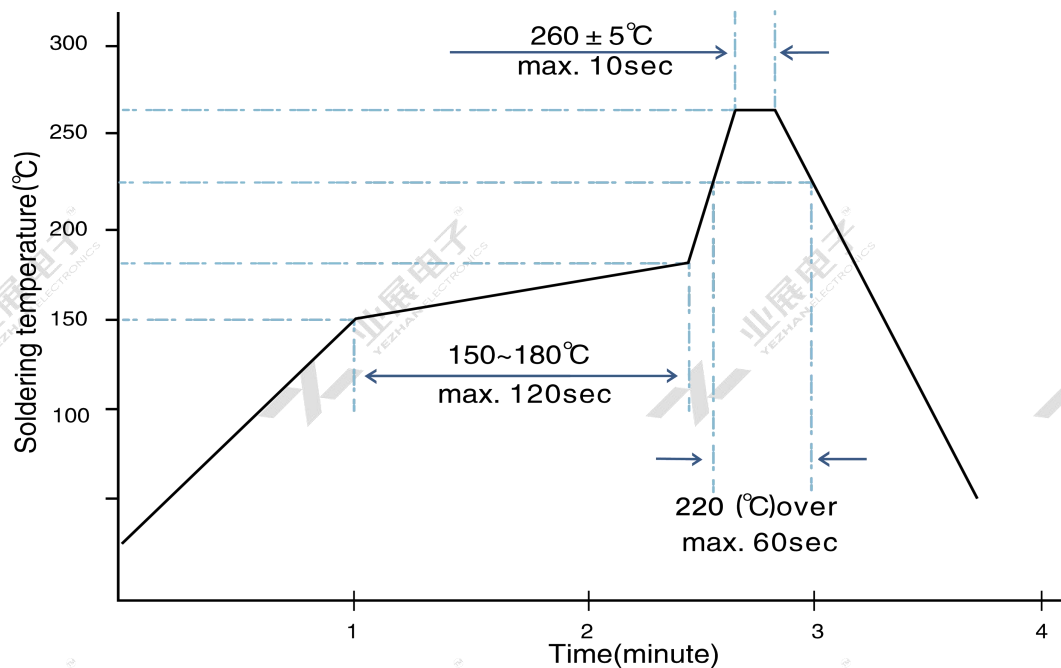
TCR (ppm/°C) : Test was conducted from 20°C to 120°C while 20°C worked as the reference.

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» 耐久性测试 Endurance Test

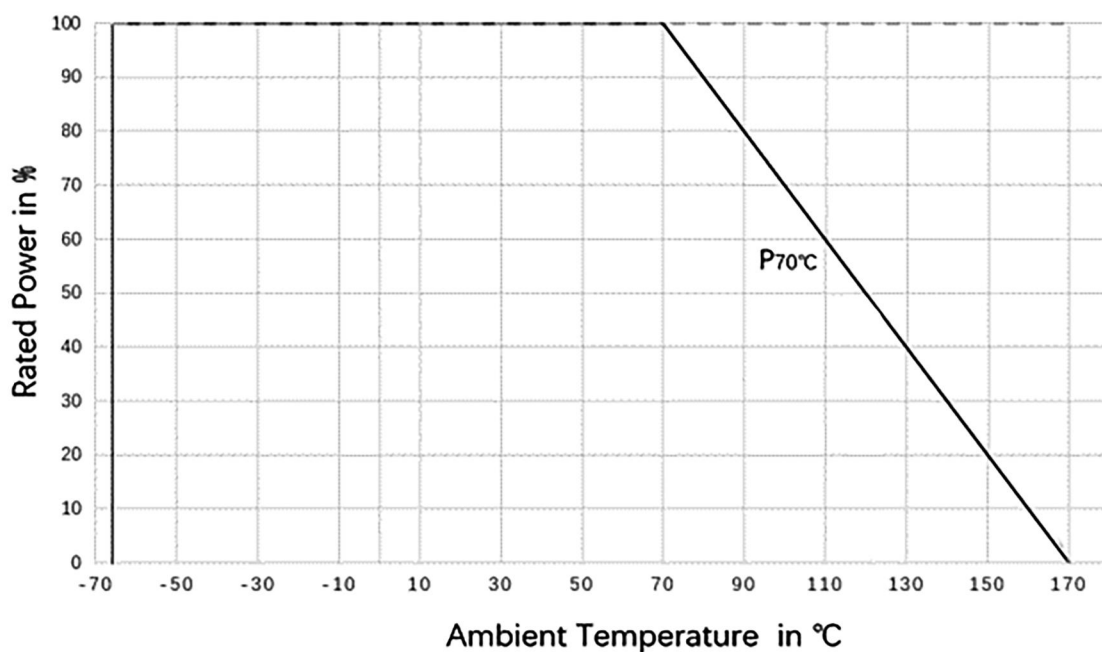
Items	Additional Requirements	Reference	Limits
Temperature Cycling	1000 Cycles (-55°C to +150°C)	JESD22 Method JA-104	±0.5%
ESD Test	1) Direct Contact (DC): ±6kV; 2) Air Discharge (AD): ±12kV, ±16kV, ±25kV;	AEC-Q200 REV D June 1	±0.5%
High Temperature Exposure	1000hrs.@T=170°C.Unpowered.	MIL-STD-202 Method 108	±0.5%
Moisture Resistance	t=24hrs/cycle.Note: Steps 7a & 7b not required. Unpowered.	MIL-STD-202 Method 106	±0.5%
Biased Humidity	1000hrs 85°C/85%RH. Note: Specified conditions:10% of operating power.	MIL-STD-202 Method 103	±0.5%
Operational Life	Condition D Steady State TA=125°C at rated power.	MIL-STD-202 Method 108	±0.5%
Solderability	245°C±5°C,2s±0.5s	J-STD-202	95% Coverage Minimum
Resistance to Soldering Heat	260°C±5°C, 10s±1s	MIL-STD-202 Method 210	±0.5%
Short Time Overload	5×Rated power for 5 s	MIL-STD-202 Method 201	±0.5%
Shock	100g , 6ms , Orientation & Shock time: ±X, ±Y, ±Z; 3 times each orientation, total 18 times.	MIL-STD-202 Method 213	±0.5%
Vibration	5 g's for 20 min, 12 cycles each of 3 orientations. Note: Use 8"X5" PCB .031" thick 7 secure points on one long side and 2 secure points at corners of opposite sides. Parts mounted within 2" from any secure point. Test from 10-2000 Hz.	MIL-STD- 202Method204	±0.5%

推荐回流焊温度曲线 Recommended Solder Reflow Temperature Condition



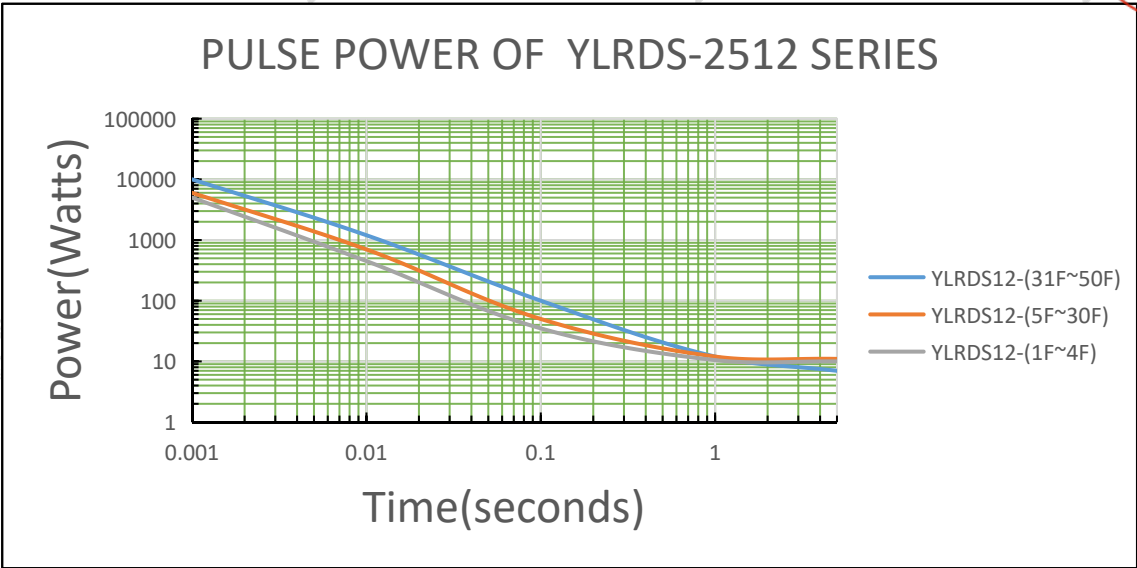
降功率曲线 Power Derating Curve

POWER DERATING CURVE



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瞬间脉冲能力曲线图 Pulse Capability Curve



印字标识 Marking

白色字码; White Printed Marking

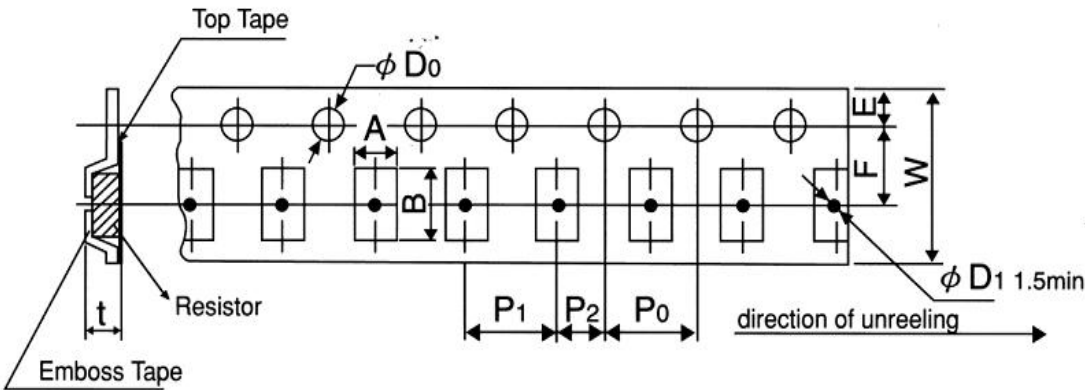
All the products marking are 4 digits. 'R' designates the decimal location in ohms
E.g.: 1.5mΩ=1R5m、3mΩ= R003; 50mΩ=R050;



	阻值	字码
XXXX	1.5mΩ	1R5m
	3mΩ	R003

包装 Packing

存储条件 Storage Conditions: Temperature:5°C~35°C, Humidity:40%~75%
编带盘装: Embossed Plastic Tape

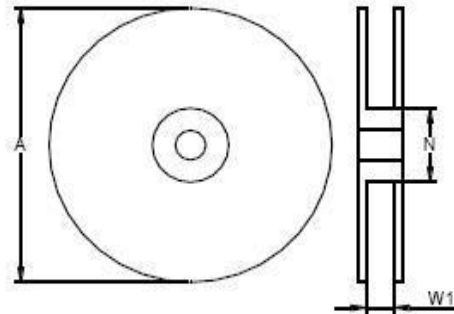


Type	A±0.1	B±0.1	W±0.3	F±0.1	E±0.1	P ₁ ±0.1	P ₂ ±0.1	P ₀ ±0.1	D ₀ ±0.1	t±0.2	Qty/reel
YLRDS12	3.45	6.65	12	5.5	1.75	4	2	4	Φ1.5	1.15	3000



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料盘规格 Reel & Tape Specifications



Unit/mm

Type	A±2	N±1	W1±1
YLRDS12	178	60	12

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版本信息 Version History

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版本 Version	日期 Date	修订描述 Description of amendment	拟定 Draft	审核 Checked
A1.0	20-Aug-2026	首版发行	鲁伟	程子鹏