

### 》 特征 Features

阻值范围 Resistance value	0.5~56mΩ
精度 Tolerance	±0.5%、±1%、±2%
功率 Power	2W、3W
温度系数 Temperature coefficient	±50ppm/°C、±100ppm/°C 、±150ppm/°C
合金材质 Alloy material	M:Manganin、F:FeCrAl
工作温度范围 Operating temperature range	-55°C~170°C
低电感 Low inductance	Manganin: < 5nH (1MHz)、 FeCrAl: < 20nH(1MHz)
绝缘阻抗 Insulation resistance	≥220MΩ (DC 500V 1min )
耐压值 Withstand voltage	500V
符合RoHS要求	RoHS compliant



### 》 应用范围 Applications

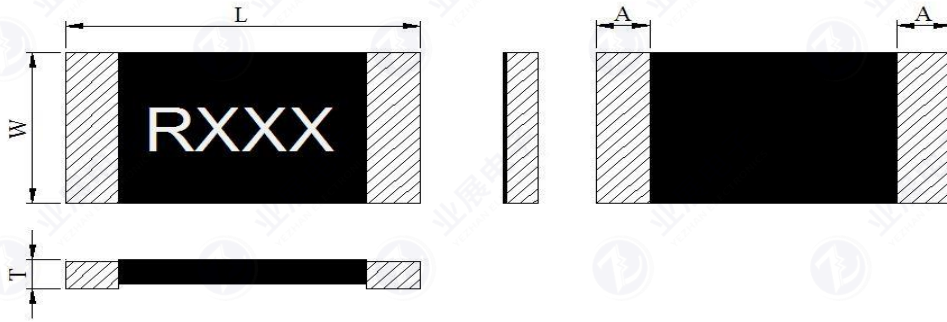
电流采样	Current sensing
过流保护	Over current protection
伺服电机控制电路	Servo motor control circuits
智能功率模块	Intelligent power modules
工业电脑模块及精密测量系统	Industrial PC modules and precision measurement system
高速CPU外围设备中电流检测电路	Current detection circuits in high-speed CPU peripherals

### 》 订购信息 Ordering Information

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

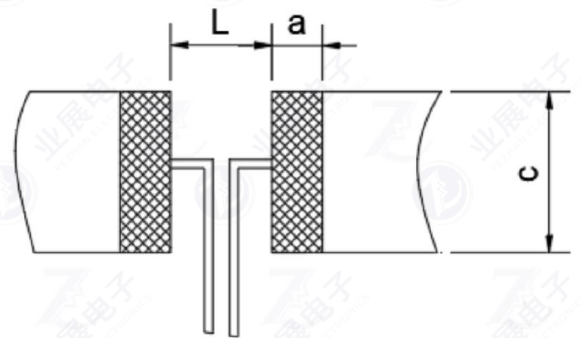
### 产品尺寸 Products Dimensions

Type	Power/W	Resistance/mΩ	Material	L/mm	W/mm	T/mm	A/mm
ZLR 2512	3	0.5/0.75	M	6.4±0.3	3.2±0.3	1.05±0.2	1.9±0.25
		1~3	M	6.4±0.3	3.2±0.3	1.1±0.2	0.8±0.25
		4	F				
		5~56	F	6.4±0.3	3.2±0.3	0.9±0.2	0.8±0.25
	2	0.5/0.75	M	6.4±0.3	3.2±0.3	1.05±0.2	1.9±0.25
		1.5/1	M	6.4±0.3	3.2±0.3	0.9±0.2	1.9±0.25
		2~4	M	6.4±0.3	3.2±0.3	0.9±0.2	0.8±0.25
5~56	F						



### 推荐焊接尺寸 Recommend Solder Pad Dimensions

Resistance/mΩ	Power/W	L/mm	c/mm	a/mm
0.5/0.75	3	1.50	3.57	2.95
1~3		3.18	3.57	2.11
4				
5~56				
1.5/1	2	1.50	3.57	2.95
0.5/0.75		3.18	3.57	2.11
2~4				
5~56				



## 标准电气规范 Standard Electrical Specifications

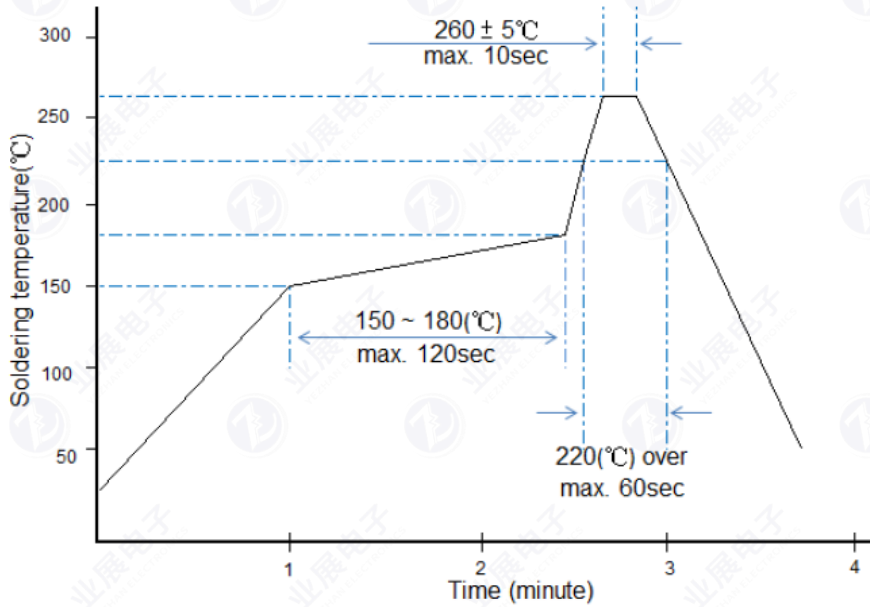
Type	Power (W)	Material	Resistance (mΩ)	TCR (ppm/°C)	Resistance Tolerance (%)
ZLR 2512	3	M	0.5/0.75	±150	±1%
		M	1	±100	±1%、±0.5%
		M	2~3	±50	±1%、±0.5%
		F	4	±50	±1%、±0.5%
	2	F	5~50	±50	±1%、±0.5%
		M	0.5/0.75	±150	±1%
		M	1/1.5	±100	±1%、±0.5%
		M	2~4	±50	±1%、±0.5%
F	5~50	±50	±1%、±0.5%		

TCR (ppm/°C) : Test conditions at 20°C~120°C.

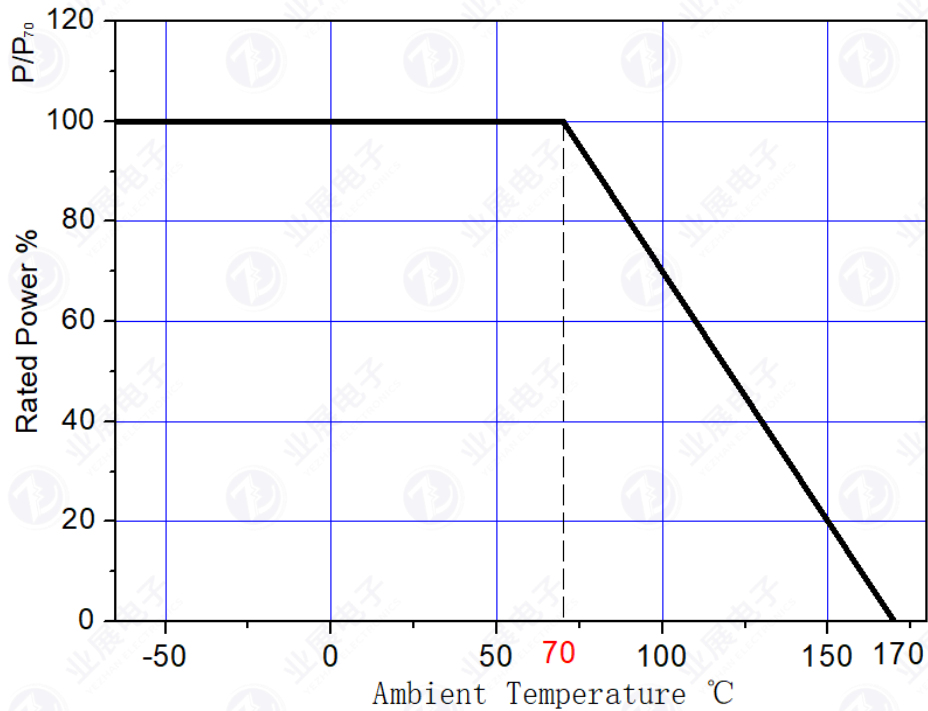
## 工作特性 Performance Characteristics

Items	Additional Requirements	Reference	Limits
Temperature Cycling	1000 Cycles(-55°C to +125°C) Measurement at 24±2hours after test conclusion	JESD22 Method JA-104	±1%
High Temperature Exposure	1000hrs.@T=125°C.Unpowered. Measurement at 24±2hours after test conclusion	MIL-STD-202 Method 108	±1%
Moisture Resistance	t=24hrs/cycle.Note:Steps 7a & 7b not required. Unpowered. Measurement at 24±2hours after test conclusion	MIL-STD-202 Method 106	±1%
Biased Humidity	1000hrs 85°C/85%RH. Note:Specified conditions:10% of operating power. Measurement at 24±2hours after test conclusion	MIL-STD-202 Method 103	±1%
Operational Life	Condition D Steady State TA=125°C at rated power. Measurement at 24±2hours after test conclusion	MIL-STD-202 Method 108	±1%
Solderability	235°C±5°C,2s±0.5s	J-STD-202	95% Coverage Minimum
Resistance to Soldering Heat	260°C±5°C, 10s±1s Measurement at 24±2hours after test conclusion	MIL-STD-202 Method 210	±1%
Short Time Overload	5×Rated power for 5 s Measurement at 24±2hours after test conclusion	MIL-STD-202 Method 201	±1%

### 回流焊温度曲线 / Solder reflow Temperature condition



### 降功率曲线 Power Derating



### >> 印字标识 Marking

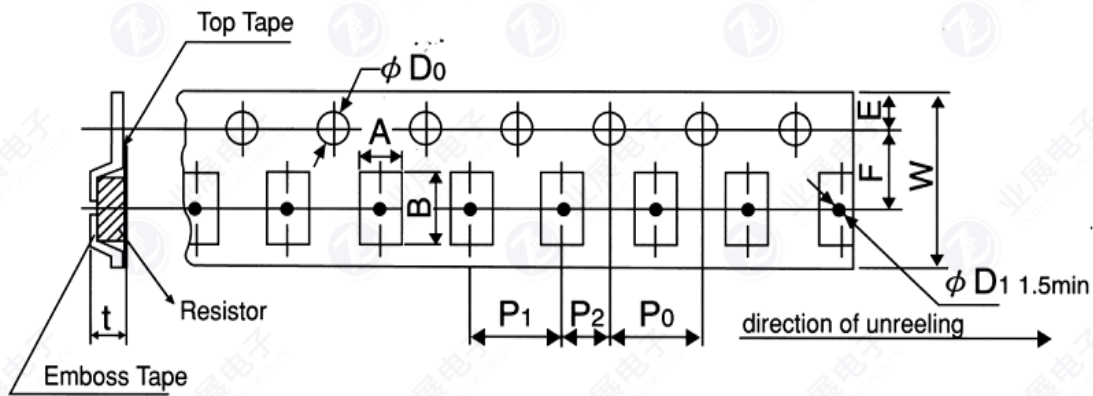
R015=15mΩ 1M50=1.5 mΩ

### >> 包装 Packaging

存储条件 Storage Conditions: Temperature:5°C~35°C, Humidity:40%~75%;

包装数量 Number of Package;

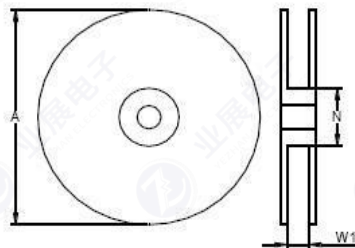
3000个/盘 3000 Pieces / Package.



Unit/mm

Type	Power /W	Resistance /mΩ	t±0.2	A±0.2	B±0.2	W±0.3	F±0.1	E±0.1	P <sub>1</sub> ±0.1	P <sub>2</sub> ±0.1	P <sub>0</sub> ±0.1	D <sub>0</sub> ±0.1
ZLR 2512	2	0.5/0.75	1.3	3.4	6.75	12	5.5	1.75	4.0	2.0	4.0	1.55
	3	0.5/0.75										
		1~4										
	2	1~56	1.0									
3	5~56											

### >> 料盘规格 Reel & Tape specifications



Unit/mm

Type	A±5	N±2	W1±1
ZLR2512	178	60	13

# 低阻值合金电流采样贴片电阻-ZLR2512系列

Low Resistance Metal Strip Chip Resistors-ZLR 2512series



业展电子  
YEZHAN ELECTRONICS

## 版本信息 Version History

Version	Date	Description of amendment	Remarks
A1.1	21-Jul-2022	First issue	
A1.2	09-Set-2022	Add Reel & Tape specifications description	

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