APPROVAL SHEET

YSK SERIES

Low Resistance Metal Strip Chip Resistors

Version	Date	Description of amendment	Draft	Checked
A1.0	12-Feb-2023	First edition	罗国涛	胡紫阳
A1.1	26-Jun-2023	Add the 0603 and 0805 series	罗国涛	胡紫阳
A1.2	14-Nov-2023	Update series resistance and delete uncertain series	陈桐熙	胡紫阳

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1.Product Description

Product name: YSK series

Description:YSK series Low Resistance Metal Strip Chip Resistors provide precise current sensing with low TCR and high power, ideal for automotive and industrial applications.

1.1 Part Number Explanation

The part number of the high power precision resistor is identified by the type name, Size, Power,TCR,tolerance,Number Of Pins,Package and resistance value.

Example: YSK120620R002FV2A

Type	Size	Power	Resistance Value	Tolerance	TCR	Number Of Pins	Package
YSK	1206=1206 2010=2010 2512=2512 2817=2817	10=1W 30=3W 50=5W 70=7W Unit: W	0m50=0.5 mΩ R002=2 mΩ R005=5mΩ Unit： mΩ	F=±1% G=±2% J=±5%	R=±50 V=±75	2=2 Pins	A=Package B=No Package

(1) **Type name:** YSK series

(2) **Size:**1206=1206;2010=2010;2512=2512;2817=2817

(3) **Power:**10=1W;30=3W;50=5W;70=7W

(4) **Resistance:**0m50=0.5 mΩ;R002=2 mΩ;R005=5mΩ

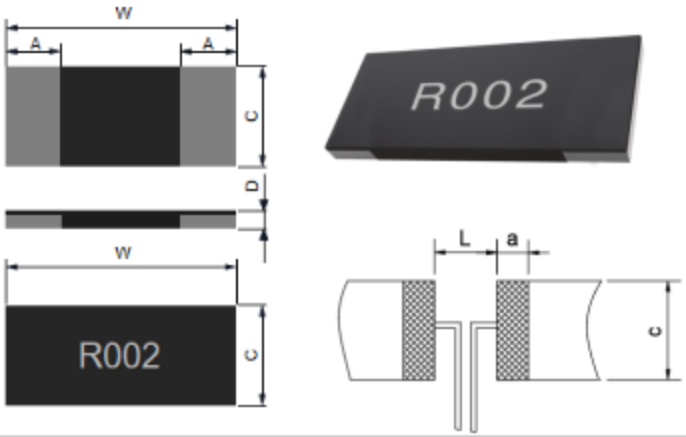
(5) **Tolerance：** F=±1%;G=±2%;J=±5%

(6) **TCR:**R=±50;V=±75

(7) **Number Of Pins：** 2=2 Pins

(8) **Package：** A=Package;B=NoPackage

1.2 Products & Recommend Pad Dimension

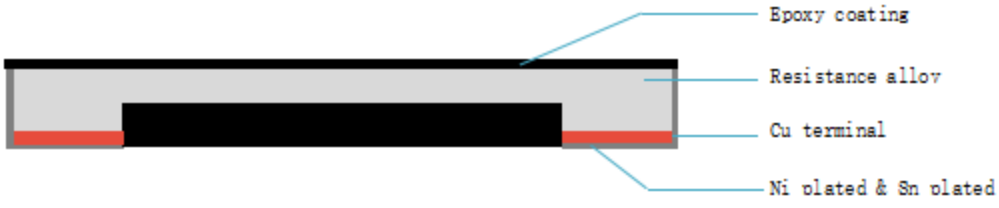


(Unit： mm)

Type	Resistance	W±0.2	C±0.2	A±0.2	D±0.2	L	a	c
YSK1206	1	3.2	1.6	1.1	0.7	0.8	1.4	1.9
	2~5			0.6		1.8	0.9	
YSK2010	1	5	2.5	1.8	0.7	1.3	2.0	2.8
	2~5			0.6		3.6	0.9	
YSK2512	0.5	6.35	3.2	2.4	0.7	1.3	2.7	3.5
	1,3,4			2.2		1.8	2.5	
	2			1.2		3.8	1.5	
	2~5			0.9		4.3	1.2	
YSK2817	0.5	7.1	4.3	2.8	0.7	1.3	3.1	4.6
	1~4			1.2		4.5	1.5	

1.3 Item Construction

Composite alloy constructions



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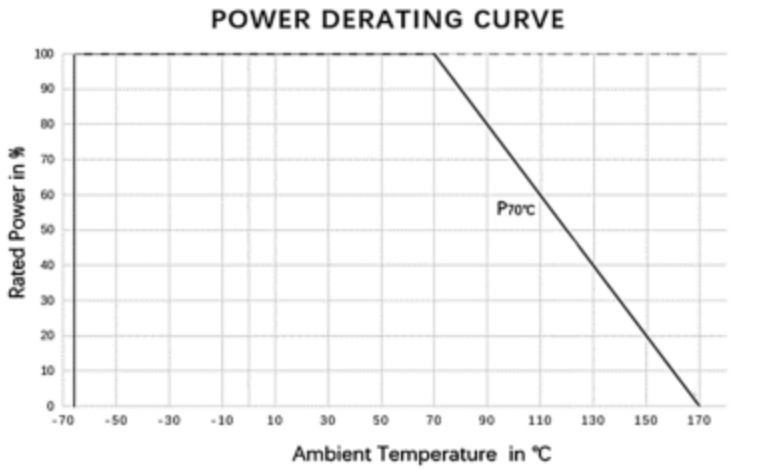
2. Technical Data

系列 Type	尺寸 Size	功率 Rated Power(W) P70℃	材料 Material	阻值 Resistance /mΩ	温漂 TCR① (ppm/℃)	精度 Resistance Tolerance (%)	工作温度 Operating Temperature (℃)
YSK	1206	1、2	CuMn CuMnSn CuMnNi	1	±50	±1% ±2% ±5%	-65℃~170℃
				2~5	±75		
	2010	2、3		1	±50		
				2~5	±75		
	2512	3、5		0.5~1	±50		
				2~5	±75		
	2817	5、6		0.5	±50		
				1~4	±75		

*TCR（ppm/℃）：Test was conducted with the temperature from 20℃ to 120℃, while 20℃ worked as reference.

3. Power Derating



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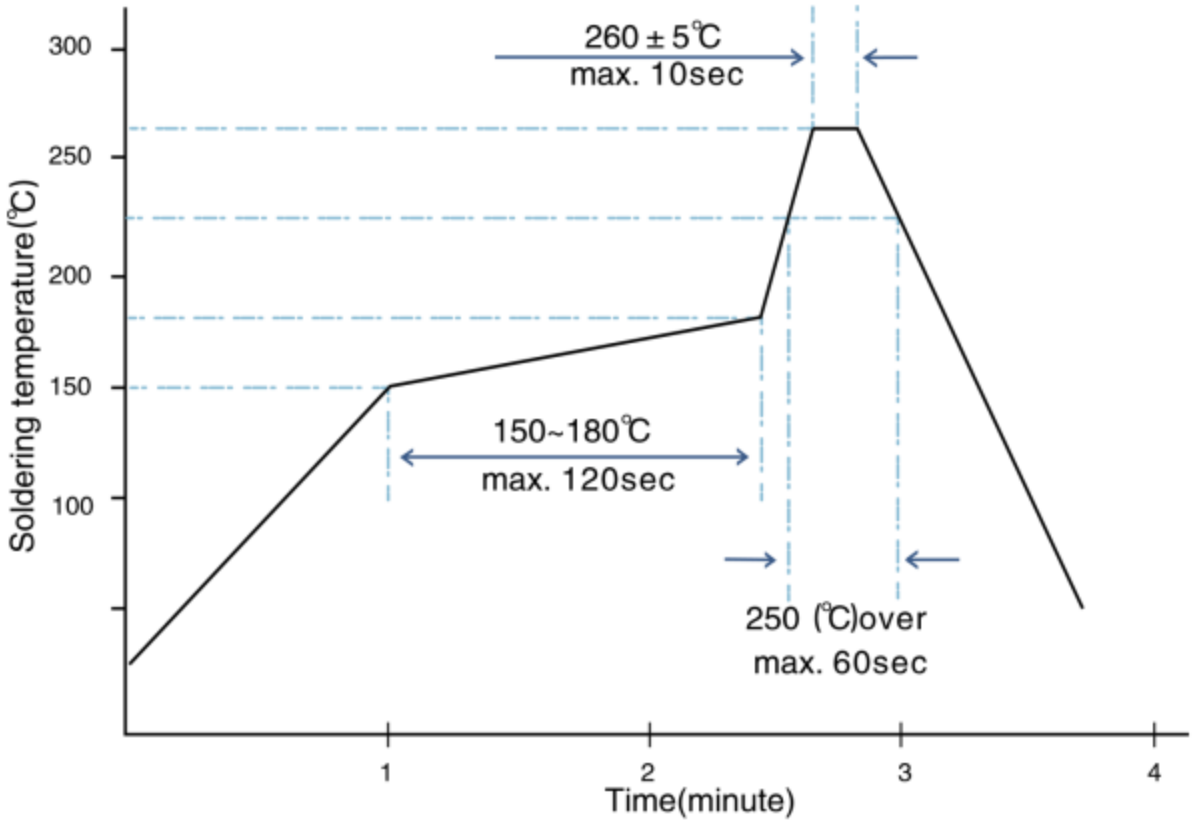
4. Solder Reflow Temperature Condition



5. Endurance Test

Iterms	Additional Requirements	Reference	Limits
Temperature Cycling	1000 Cycles (-55℃ to +150℃)	JESD22 Method JA-104	±0.5%

ESD Test	1) Direct Contact (DC): ±6kV; 2) Air Discharge (AD): ±12kV, ±16kV, ± 25kV;	AEC-Q200 REV D	±0.5%
High Temperature Exposure	1000hrs.@T=170℃.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℃/85%RH。 Note: Specified conditions:10% of operating power.	MIL-STD-202 Method 103	±0.5%
Operational Life	Condition D Steady State TA=125℃ at rated power.	MIL-STD-202 Method 108	±0.5%
Thermal Shock	1000X(-55°C to +150°C)	MIL-STD-202Method107G	±0.5%
Solderability	235℃±5℃,2s±0.5s	J-STD-202	95% Coverage Minimum
Resistance to Soldering Heat	260℃±5℃，10s±1s	MIL-STD-202 Method 210	±0.5%
Short Time Overload	2.5×Rated power for 10 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%

6. Marking

Laser Marking:

- All the products marking are 3 or 4 digits. 'R' designates the decimal location in ohms

  E.g., :

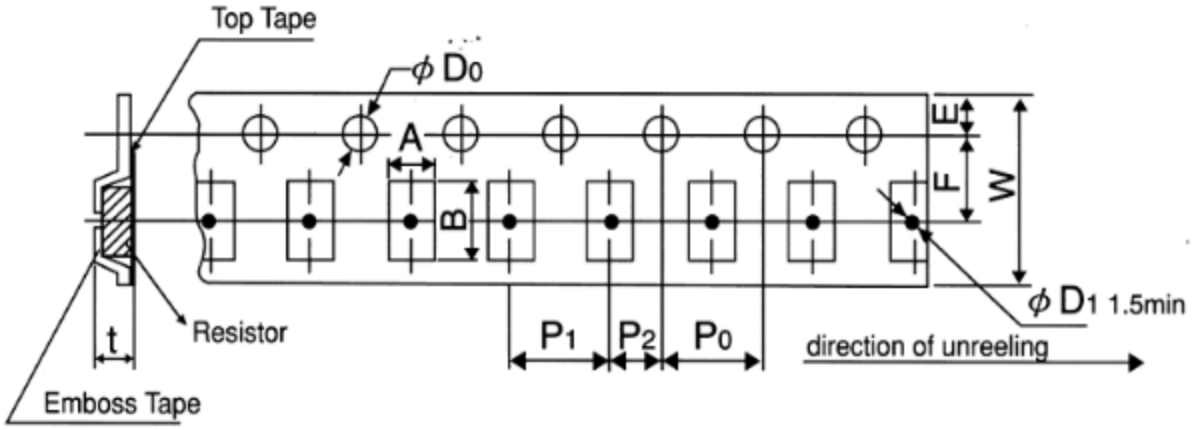
- 3mΩ= R003; 0.5mΩ=0m50

Laser marking is default. If need white printed marking, pls contact Yezhan sales team.

7. Packing

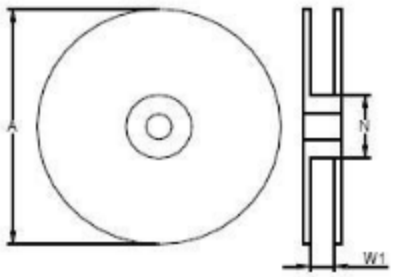
Storage Conditions: Storage Conditions: Temperature:5℃~35℃, Humidity:40%~75%

Packing Type: Embossed Plastic Tape



Unit/mm

Type	A±0.2	B±0.2	W±0.3	F±0.1	E±0.1	P1±0.1	P2±0.1	P0±0.1	D0±0.1	t±0.2	Qty/reel
YSK1206	2.0	3.6	8.0	3.5	1.7	4.0	2.0	4.0	Φ1.5	0.84	3000
YSK2010	2.75	5.5	12	5.5	1.75	4.0	2.0	4.0	Φ1.5	0.82	3000
YSK2512	3.6	6.9	12	5.5	1.75	4.0	2.0	4.0	Φ1.5	1.2	3000
YSK2817	4.8	7.2	16	7.5	1.75	6.0	2.0	4.0	Φ1.5	1.2	1500



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Type	A±2	N±1	W1±1
YSK1206	178	60	12
YSK2010			
YSK2512			
YSK2817			

This document is a product specification. Contents are subject to change without notice.

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