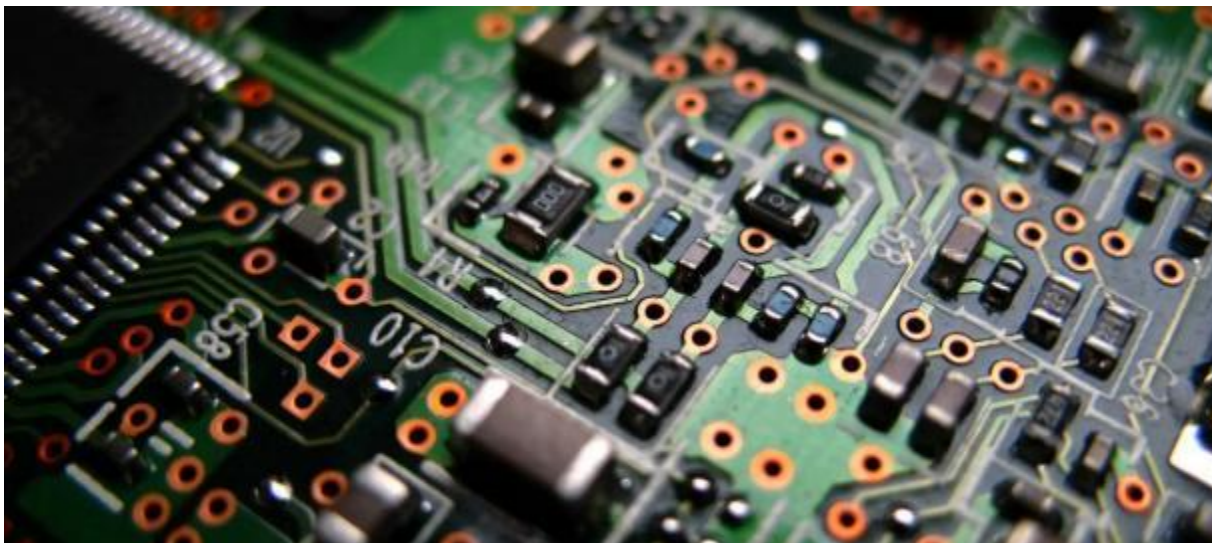


焊接电阻规格书 Welding resistance specification

适用范围 Scope

- 焊接电阻系列 Welding Resistance Series.
- 符合ROHS 要求 Complies With ROHS Requirements
- 符合车规AEC-Q200 测试 Conforms To Vehicle-specific AEC-200 Tests



型号规格Type Designation :

电阻尺寸 Product Type	产品类型 Resistor Size	功率 Power	阻值精度 Resistance tolerance	阻值范围(mΩ) Resistance
2512	WE(焊接)	3W	0.5%1%/2%/5%	0.2~5
3920	WE(焊接)	5W	0.5%1%/2%/5%	0.2~5
5930	WE(焊接)	7W	0.5%1%/2%/5%	0.1~3

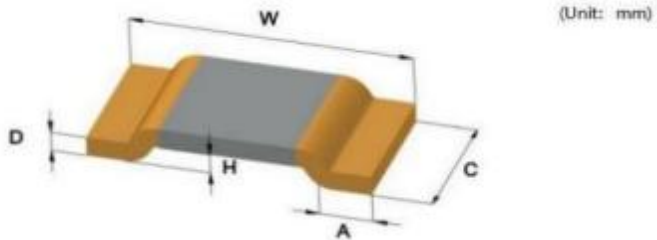
编码原则Coding principle:

制造商/产品 manufacturer	尺寸 size	类型 type	功率 Power	阻值 resistance	精度 accuracy	包装数量 quantity
YHR	3920	WE	5W	R001	1%=F	2500 PCS

示例/ Example: YHR3920WE5WR001F25

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结构尺寸Construction and Dimension :

						
产品尺寸 Product	类型 type	阻值/mΩ Resistance	W	A	C	H
2512	WE	0.2~5	6.3±0.2	1.2±0.2	3.1±0.3	0.5±0.1
3920	WE	0.2~5	10.0±0.2	2.2±0.2	5.1±0.4	0.5±0.1
5930	WE	0.2~5	15.0±0.3	4.2±0.3	7.6±0.4	0.5±0.1

电气规格Electrical Specifications :

type	Material	Resistance	Rthi(°C/W)	D±0.1 (mm)	TCR	P70 °C (W)
WE 2512	S	0.2mΩ	3	1.4	±175	6
	M	0.3mΩ	5	1.5	±175	6
		0.5mΩ	6	0.93	±115	6
		1mΩ	10	0.45	±100	5
	K/F	1.2mΩ	-	1.08	±70	6
		1.5mΩ	-	0.86	±70	5
		2mΩ	15	0.65	±70	5
		2.5mΩ	-	0.5	±70	4
		3mΩ	24	0.43	±70	4
		4mΩ	27	0.31	±70	3
		5mΩ	40	0.28	±70	3
WE 3920	M	0.2mΩ	3	1.64	±200	12
		0.3mΩ	3.5	1.37	±150	10
		0.4mΩ	-	0.97	±100	9
		0.5mΩ	7	0.83	±70	9
		0.7mΩ	9	0.55	±70	8
		1mΩ	10	0.4	±50	7
	K/F	1mΩ	7	1.16	±50	8
		1.5mΩ	-	0.75	±50	6
		2mΩ	14.5	0.56	±50	6
		2.5mΩ	-	0.47	±50	5

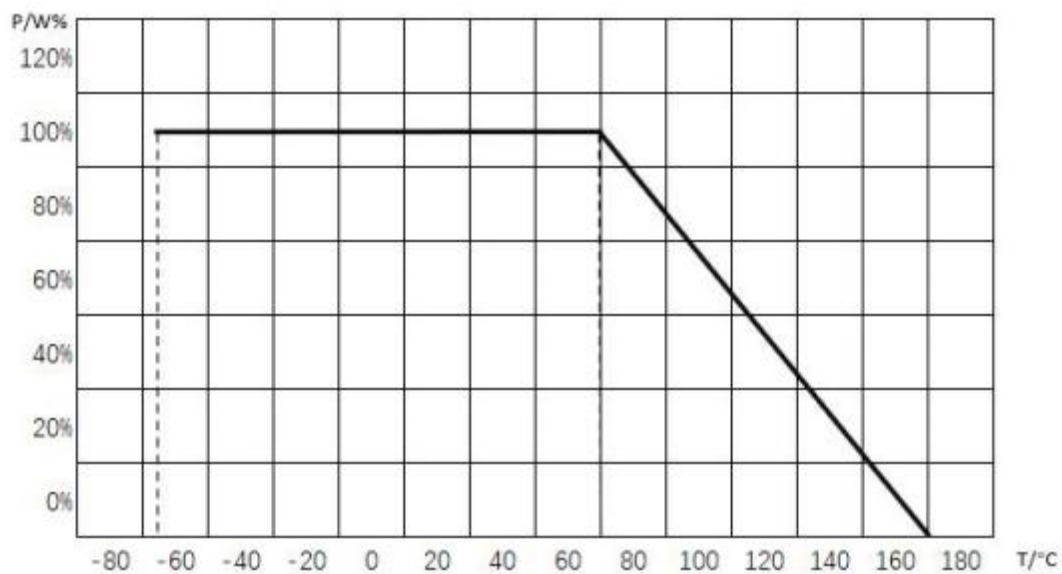
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		3mΩ	22	0.37	±50	5
		4mΩ	24	0.28	±50	5
		5mΩ	-	0.28	±50	4
5930	S	0.1 mΩ	2	2.0	±200	15
	M	0.2 mΩ	3	1.5	±100	15
		0.3 mΩ	-	0.98	±100	10
		0.35 mΩ	-	0.83	±100	10
		0.4 mΩ	-	0.75	±100	10
		0.5 mΩ	3.5	0.6	±75	10
		0.6 mΩ	-	0.5	±75	10
		0.75 mΩ	6	0.41	±75	10
	K/F	1 mΩ	7	0.86	±50	9
		1.5 mΩ	10	0.61	±50	8
		2 mΩ	13	0.4	±50	7
		2.5 mΩ	-	0.34	±50	7
		3 mΩ	17.5	0.29	±50	7

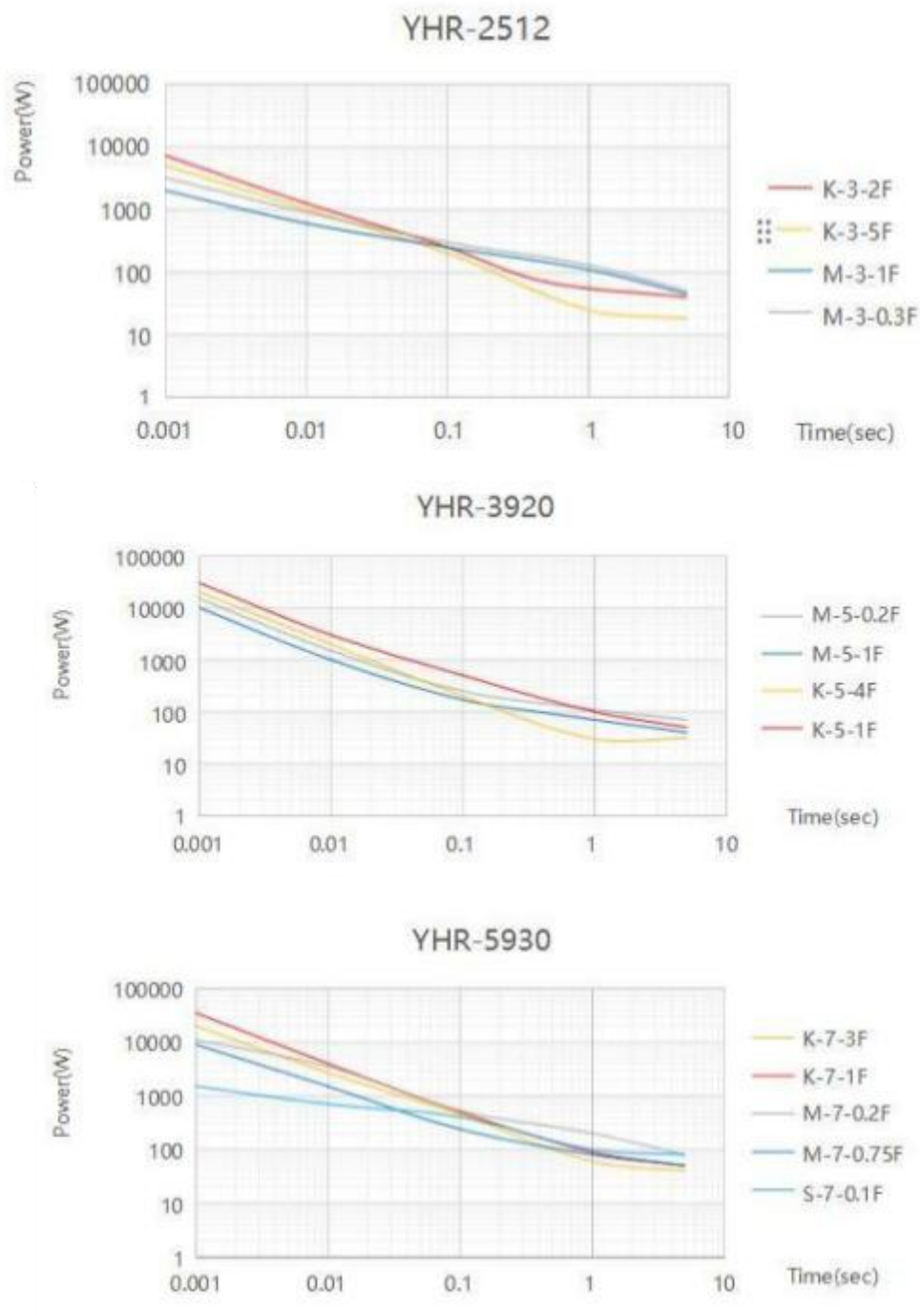
TCR (ppm/°C) : Test was conducted with the temperature from 20°C to 120°C , while 20°C worked as reference.

功率衰减曲线图 / Derating Curve



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脉冲功率曲线 Pulse power curve



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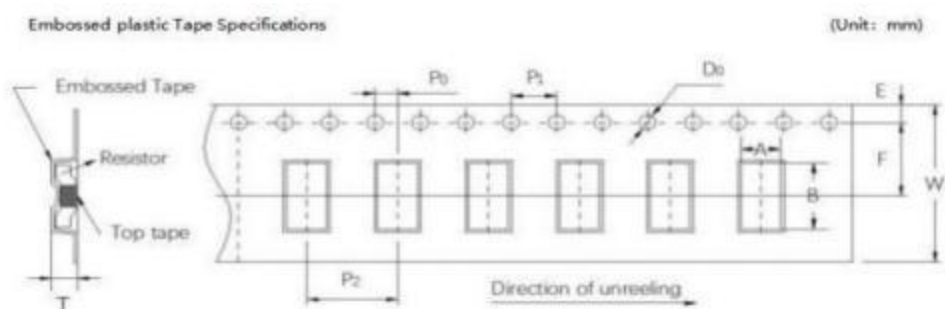
可靠性验证Reliability Tests

Items	Additional Requirements	Reference	Limits
Dimension	Verified according to the specification .	GB/T 5729-1994-4.4.2	As Spec
High Temperature Exposure	1000 hrs. (T =170°C) , unpowered. Measurement at 24±4 hours after test conclusion .	MIL-STD-202Method 108	±0.5%
Temperature Cycling	1000 Cycles(-55°C to +155°C) ,unpowered. Minimum dwell time 15min. at each temperature extreme. maximum transition time1 min. . Measurement at least 24hoursafter test conclusion .	JESD22-A-104	±0.5%
HumidityBias	1000hrs. (85°C/85%RH) . Note: Specify conditions: 10% of Long-term operating current. Measurement at 24±4 Hours after test conclusion .	MIL-STD-202Method 103	±0.5%
High Temperature Operating Life	1000 hrs.(T =125°C). Long-term operating current was applied to the products intermittently: 90 minutes ON and 30 minutes OFF . Measurement at 24±4 hours after test conclusion .	MIL-STD-202Method 108	±0.5%
Resistance to Soldering Heat	250°C ±5°C , 30s±5s	MIL-STD-202Method 210	±0.5%
Solderability	Steam ageing for 8 hours (93°C);2) Weld bath temperature 245°C±5°C, duration5±0.5S .	J-STD-002	95% Coverage Minimum
Vibration	20 min.(5 g's) , test from10Hz-2000 Hz, 12 cycles each of 3 orientations .	MIL-STD-202Method 204	±0.5%
Board Flex Test	Apply an external force once to the circuit board, bend at least Dx = 2mm, duration 60+5 S .	AEC-Q200-005	±0.5%
Terminal Strength (SMD)	Apply an external force once to the side of the test device, the force is 17.7N(1.8kg), duration 60+1S .	AEC-Q200-006	±0.5%
Mechanical Shock	1) Pulse waveform: Half-Sine pulse; 2) Accelerate peak: 100g's; 3) Pulse duration: 6ms; 4) Orientation & Shock time: ±X, ±Y, ±Z, 3 times each orientation,total 18 times .	MIL-STD-202H Method 213	±0.5%
ESD	1) Direct Contact (DC): ±6kV ; 2) Air Discharge (AD): ±12kV, ±16kV, ±25kV .	AEC-Q200-002 REV-B	±0.5%

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Items	Additional Requirements	Reference	Limits
Resistance to Solvents	Note: Add Aqueous wash chemical - OKEM Clean or equivalent.Do not use banned solvents .	MIL-STD-202 Method215	There was no missing, faded, smeared,blurred, or shifted (dislodged) with the marks. There was no crack,separation, crazing,swelling, softening, degradation on the samples.
Flame Retardance	1) Test current: 100%, 115%,130%, 150% (Long-term operating current) . 2) Test duration: 1h .	AEC-Q200-001	The temperature is not higher than 350 ° C for more than 10 seconds, no flame, no explosion.

载带尺寸Tape Packaging Dimensions:

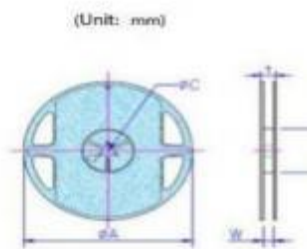


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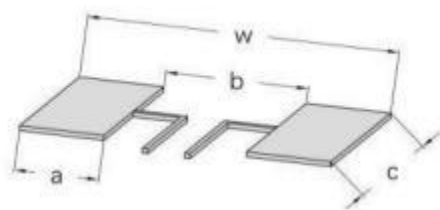
SIZE	Resistance Alloy	Resistance Range (mΩ)	A ±0.15	B ±0.15	W ±0.3	E ±0.15	F ±0.15	Po ±0.15	P1 ±0.15	P2 ±0.15	D ₀ ±0.15	Quantity (pcs)	T ±0.15
2512	S	0.2	3.6	6.7	16	1.75	7.5	2	4	8	1.5	1000	Depends on the thickness of the product
	M	0.3	3.7	6.9	16	1.75	7.5	2	4	8	1.5	1000	
		0.5	3.5	6.7	12	1.75	5.5	2	4	4	1.5	2000	
		0.6~1	3.5	6.7	12	1.75	5.5	2	4	4	1.5	3000	
	K/F	1.1~1.5	3.5	6.7	12	1.75	5.5	2	4	4	1.5	2000	
		1.5~5	3.5	6.7	12	1.75	5.5	2	4	4	1.5	3000	
3920	M	0.2	5.8	10.6	24	1.75	11.5	2	4	12	1.5	2000	
		0.3	5.6	10.65	24	1.75	11.5	2	4	12	1.5	1500	
		0.4	5.8	10.5	24	1.75	11.5	2	4	12	1.5	2500	
		0.5	5.7	10.4	16	1.75	7.5	2	4	12	1.5	2500	
		0.7~1	5.8	10.5	16	1.75	7.5	2	4	12	1.5	2500	
	K/F	1	5.8	10.5	24	1.75	11.5	2	4	12	1.5	2500	
		1.5~5	5.8	10.5	16	1.75	7.5	2	4	12	1.5	2500	
5930	S	0.1	8.5	15.7	24	1.75	11.5	2	4	12	1.5	1000	
	M	0.2	8.5	15.7	24	1.75	11.5	2	4	16	1.5	1000	
		0.3~0.35	8.5	15.7	24	1.75	11.5	2	4	16	1.5	1500	
		0.4~0.5	8.1	15.5	24	1.75	11.5	2	4	12	1.5	2000	
		0.6~0.8	8.5	15.7	24	1.75	11.5	2	4	12	1.5	2000	
	K/F	1	8.1	15.5	24	1.75	11.5	2	4	12	1.5	2000	
		2~3	8.5	15.7	24	1.75	11.5	2	4	12	1.5	2000	

卷盘尺寸 Reel Dimensions:



Size	2512 W=12	2512 W=16	3920 W=24	3920 W=16	5930
φA	178	203	330	330	330
φB	60	60	100	100	100
φC	13	13	13	13	13
W	12.5	16.5	24.5	16.5	24.5
T	21	21	29	21	29

焊盘尺寸 : Pad size



Solder Pad Type	w	c	a	b
YHR-S/ M/ K/ F-3	7	3.4	1.8	3.4
YHR-S/ M/ K/ F- 5	11	6.2	2.7	5.6
YHR-S/ M/ K/ F-7	16	8.75	5.2	5.6

版本信息 : Version History

版本 Version	日期 Date	修订描述 Description of amendment
A1.0	04-May-2024	首版发行
A2.0	06-JAN-2025	1、更新部分5930及3920载带信息 2、更新部分3920产品信息

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