

分流贴片电阻-DSLR系列

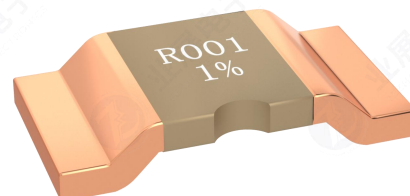
Alloy Shunt Resistors – DSLR Series



业展电子
YEZHAN ELECTRONICS

特征 Features

精度±5%、±2%、±1%和±0.5%	Tolerance ±5%, ±2%, ±1% and ±0.5%
使用温度-65℃~170℃	Operating Temperature range -65℃~170℃
焊接结构	Welding constructure
耐冲击	Ideal for pulse application
电感小于 3 纳亨	Low Inductance < 3nH
符合RoHS,REACH要求	REACH,RoHS compliant
特殊规格可以订做	Customizable



应用范围 Applications

变频驱动、伺服驱动系统	Frequency conversion drive, servo drive system
大电流电池管理系统	High current battery management system
汽车电子控制单元、汽车油泵驱动	Automobile electronic control unit automobile oil pump drive
DC/DC, DC/AC电源模块	DC/DC, DC/AC power modules
自动化控制系统	Automatic control system
工业仪器设备	Industrial instrument and equipment

订购信息 Ordering information

DSLR	-K	-5	-1	F
Yezhan Type	Element Material	Dimension (in)	Resistance Value(mΩ)	Tolerance (%)
DSLR	M: CuMn K: Karma	3: 2512 5: 3920 7: 5930	1: 1mΩ	J: ±5 G: ±2 F: ±1 D: ±0.5

说明 Notice

适用范围 Scope

本承认书适用于深圳市业展电子有限公司 制造之[分流贴片电阻器]。

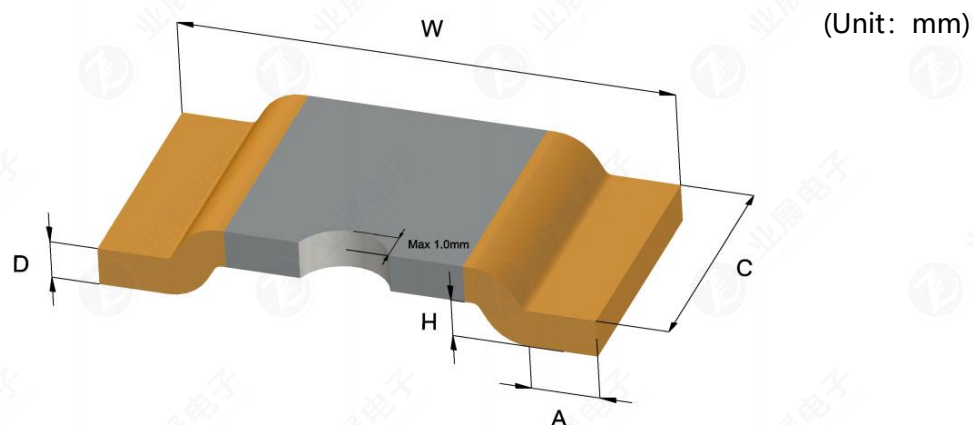
This specification is available for Alloy Shunt Resistors manufactured by Shenzhen Yezhan Electronics Co., Ltd.

标准试验状态 Standard measuring conditions

温度20±2℃、湿度65±5%。但在温度 5~35℃、湿度45~85%之情况下，仍可给予判定。

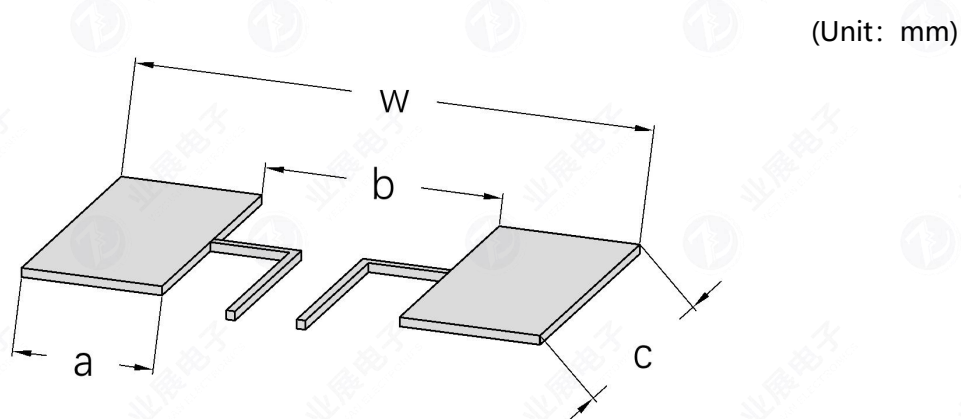
Temperature 20±2℃, Humidity 65±5%. Being no doubt about the judgment, measurements can be made within the following Temperature 5~35℃, Humidity 45~85%.

产品尺寸 Product dimensions



Type	Size (in)	W	A	C	H
DSLR-M/K-3	2512	6.3±0.2	1.2±0.2	3.1±0.3	0.5±0.1
DSLR-M/K-5	3920	10.0±0.2	2.2±0.2	5.1±0.4	
DSLR-M/K-7	5930	15.0±0.3	4.2±0.3	7.6±0.4	

PCB板布局 PCB-layout (Reflow-soldering)



Solder pad type	w	c	a	b
DSLR-M/K-3	7	3.4	1.8	3.4
DSLR-M/K-5	11	6.2	2.7	5.6
DSLR-M/K-7	16	8.75	5.2	5.6

» 技术参数 Technical Data

Size (in)	Resistance Range (mΩ)	Resistance Alloy	Resistance (mΩ)	R _{thi} (°C/W)	D±0.1 (mm)	*TCR (ppm/°C)	P ₇₀ °C (W)
2512	0.3~5	M	0.3	5	1.5	±175	6
			0.5	6	0.93	±115	6
			1	10	0.45	±100	5
		K	2	15	0.65	±70	6
			3	24	0.43	±70	4
			4	27	0.31	±70	4
			5	40	0.28	±70	3
3920	0.2~4	M	0.2	3	1.64	±200	12
			0.3	3.5	1.37	±150	10
			0.5	7	0.83	±70	9
			0.7	9	0.55	±70	8
		K	1	7	1.16	±50	8
			3	22	0.37	±50	5
			4	24	0.28	±50	5
5930	0.2~3	M	0.2	3	1.5	±100	15
			0.3	-	0.98	±100	10
			0.5	3.5	0.6	±75	10
		K	1	7	0.86	±50	9
			2	13	0.4	±50	7
			3	17.5	0.29	±50	7

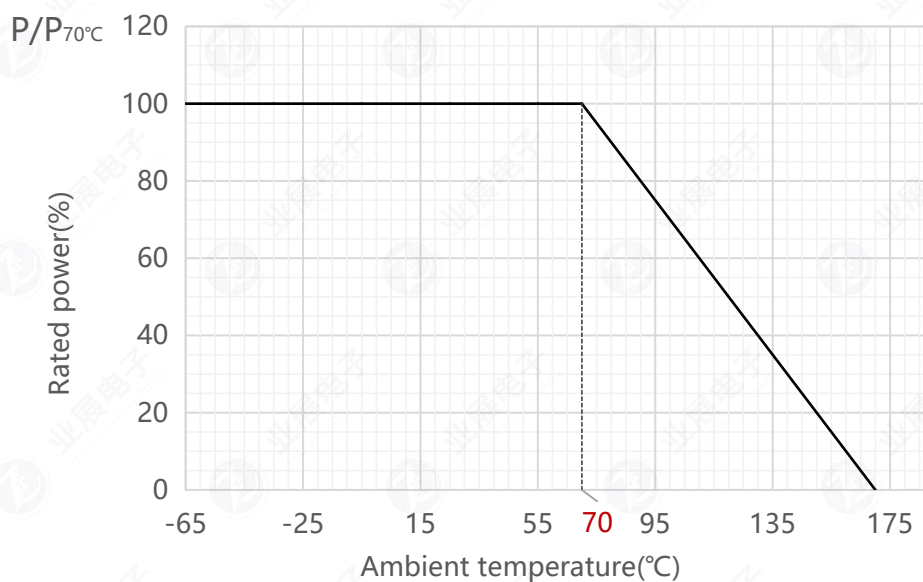
TCR (ppm/°C) : Test was conducted with the temperature from 20°C to 120°C , while 20°C worked as reference.

备注: K材质产品温漂低至10ppm/°C, 参看ASHP-K系列。

Note: TCR of products with K material could be lower to 10ppm/°C, please see ASHP-K series.

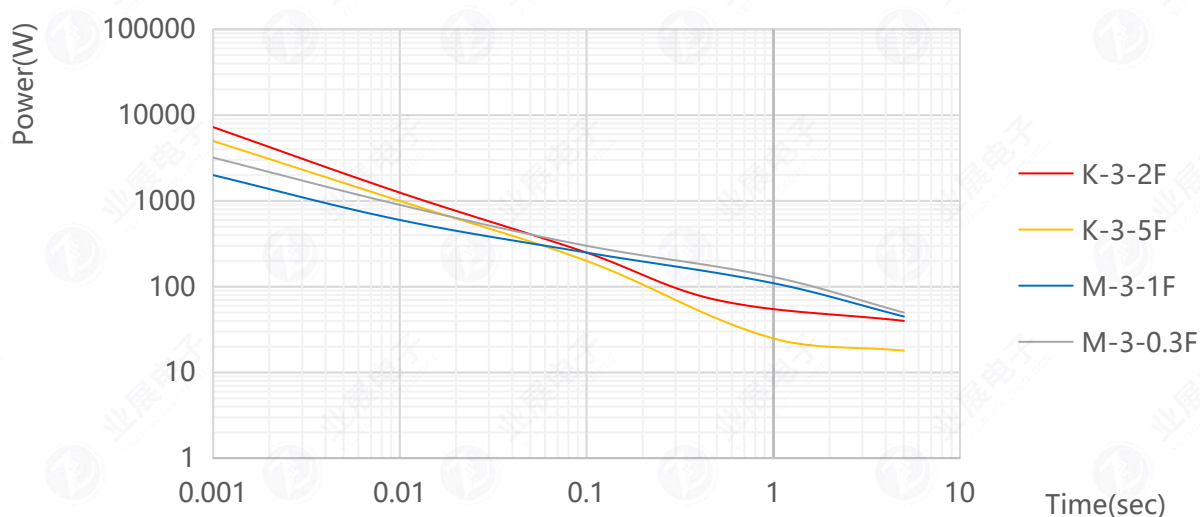
工作特性 Performance Data

功率降额曲线 Power derating curve



脉冲功率曲线 Pulse power curve

DSLR-2512



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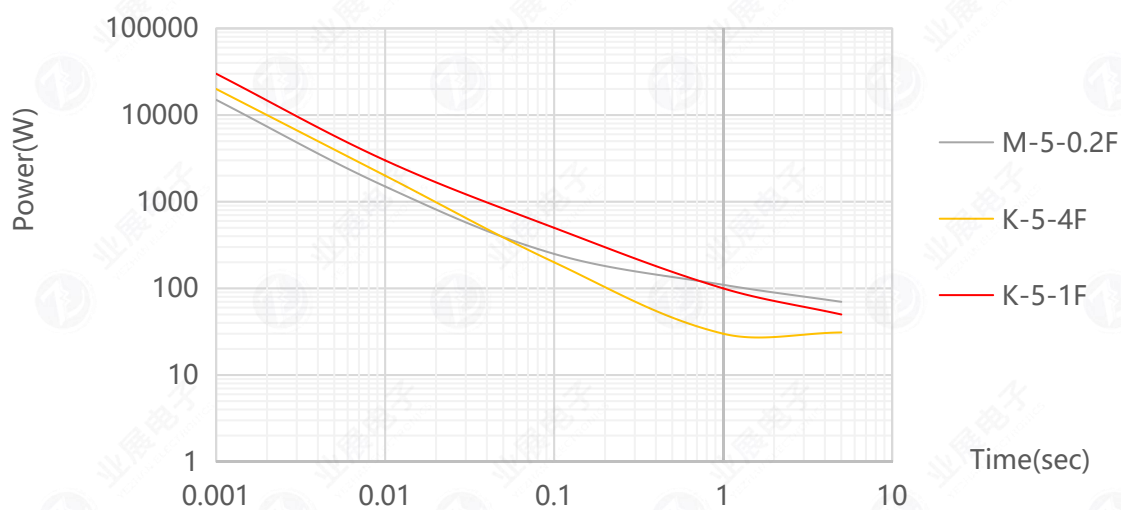
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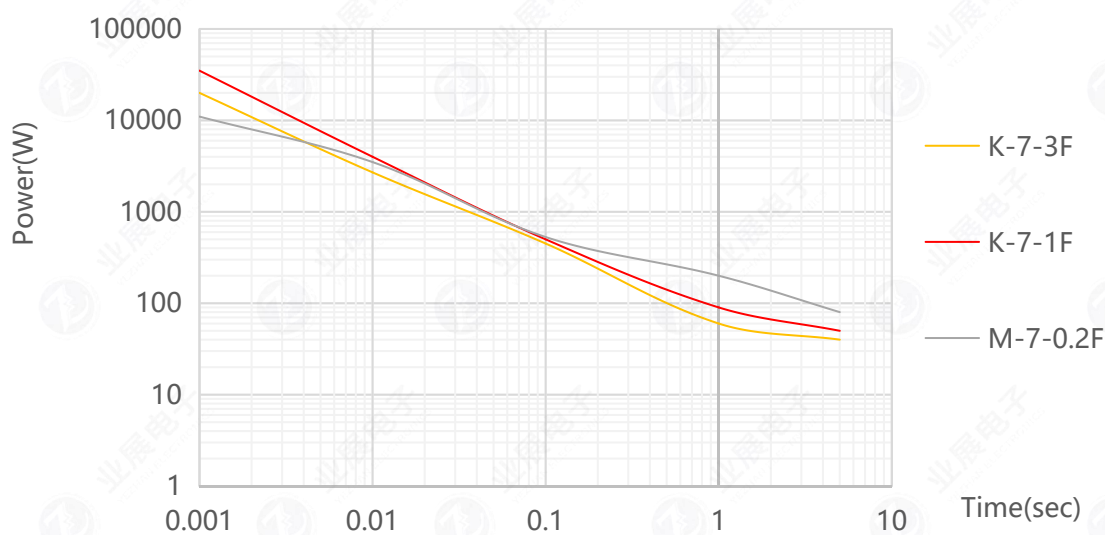
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脉冲功率曲线 Pulse power curve

DSLR-3920



DSLR-5930



» 耐久性测试 Endurance Test

Items	Additional Requirements	Reference	Limits
High Temperature Exposure	1000 hrs. (T=170°C) , unpowered. Measurement at 24±4 hours after test conclusion .	MIL-STD-202 Method 108	±0.5%
Temperature Cycling	1000 Cycles(-55°C to +155°C) , unpowered. Minimum dwell time 15min. at each temperature extreme. maximum transition time 1 min. . Measurement at least 24 hours after test conclusion .	JESD22-A-104	±0.5%
Humidity Bias	1000 hrs. (85°C/85%RH) . Note: Specify conditions: 10% of rated power. Measurement at 24±4 hours after test conclusion .	MIL-STD-202 Method 103	±0.5%
High Temperature Operating Life	1000 hrs.(T=125°C). Rated power was applied to the products intermittently: 90 minutes ON and 30 minutes OFF . Measurement at 24±4 hours after test conclusion .	MIL-STD-202 Method 108	±0.5%
Resistance to Soldering Heat	250°C±5°C , 30s±5s	MIL-STD-202 Method 210	±0.5%
Solderability	Weld bath temperature 245°C±5°C, duration 5±0.5S .	J-STD-002	95% Coverage Minimum
Vibration	20 min.(5 g's) , test from 10Hz-2000 Hz, 12 cycles each of 3 orientations .	MIL-STD-202 Method 204	±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%
Resistance to Solvents	Note: Add Aqueous wash chemical - OKEM Clean or equivalent. Do not use banned solvents .	MIL-STD-202 Method 215	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.

» 性能测试 Performance testing

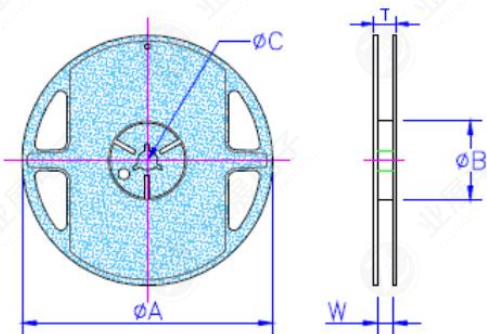
Items	Additional Requirements	Reference	Limits
Short Time Overload	Apply 5 times the rated power for 5 seconds and release the load for about 30 minutes, then measure its resistance variance rate.	MIL-STD-202 Method 301	±0.5%

印字标识 Marking

R001 R001: 1mΩ (Value阻值) Or 0m30 0m30: 0.3mΩ (Value阻值)
1% 1%: ±1% (Tolerance精度) 0.5% 0.5% : ±0.5% (Tolerance精度)

包装 Packaging

(Unit: mm)



Size (in)	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

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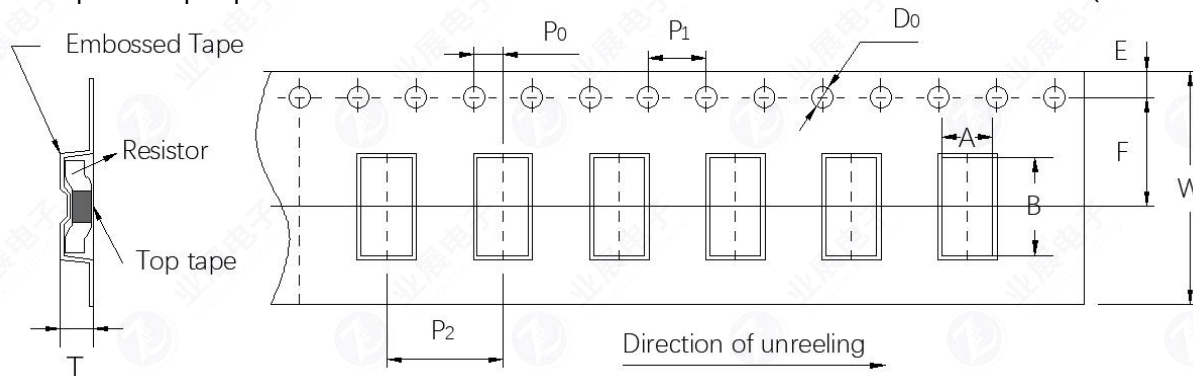
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Embossed plastic Tape Specifications

(Unit: mm)



Size (in)	Resistance Alloy	Resistance Range (mΩ)	A ± 0.15	B ± 0.15	W ± 0.3	E ± 0.15	F ± 0.15	P_0 ± 0.15	P_1 ± 0.15	P_2 ± 0.15	D_0 ± 0.15	Quantity (pcs)	T ± 0.15
2512	M	0.3	3.7	6.9	16	1.75	7.5	2	4	8	1.5	1000	Depends on the thickness of the product
		0.5	3.5	6.7	12	1.75	5.5	2	4	4	1.5	2000	
		1	3.5	6.7	12	1.75	5.5	2	4	4	1.5	3000	
	K	2~5	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	
		0.5	5.7	10.4	16	1.75	7.5	2	4	12	1.5	2500	
		0.7	5.8	10.5	16	1.75	7.5	2	4	12	1.5	2500	
	K	1	5.8	10.5	24	1.75	11.5	2	4	12	1.5	2500	
		3~4	5.8	10.5	16	1.75	7.5	2	4	12	1.5	2500	
5930	M	0.2	8.5	15.7	24	1.75	11.5	2	4	16	1.5	1000	
		0.3	8.5	15.7	24	1.75	11.5	2	4	16	1.5	1500	
		0.5	8.1	15.5	24	1.75	11.5	2	4	12	1.5	2000	
	K	1~2	8.1	15.5	24	1.75	11.5	2	4	12	1.5	2000	
		3	8.5	15.7	24	1.75	11.5	2	4	12	1.5	2000	

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2024.09.04

版本信息 Version History

版本 Version	日期 Date	修订描述 Description of amendment	拟定 Draft	受控文件 审核 Checked
A1.0	04-Jul-2024	首版发行	范维龙	林明月
A1.1	02-Sep-2024	更新耐久性测试项目	范维龙	林明月

YZ-WP-RD-159

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