

Wire WOUND Chip Resistor

WR Series 贴片绕线电阻



■Flameproof and insulating coating designed to assure

safe usage by special non-flammable silicon-base

※Small size are good for high density application

※High power rating up to 2Watts

■外型尺寸/Construction & Dimension

※High thermal stability and low surface temperature rise

※Compatible with lead (Pb)-free and lead containing

soldering processes

※ The resistors are suitable for processing

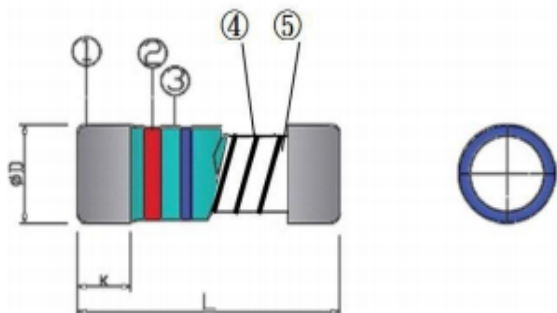
on automatic SMD assembly systems.

■PART NUMBER



WR	0309	J		5R10	T	25	B
PART CODE	SIZE	TOLERANCE	TCR	RESISTANCE	PACKAG- ING	PACKAGE	
	0207 0309 0411	J=±5% F=±1%	=±400PPM/°C	1R00=1Ω 5R10=5.1Ω 22R0=22Ω 1000=100Ω	B=BULK T= TAPING REEL	10=1000PCS 20=2000PCS 25=2500PCS 50=5000PCS 70=7000PCS 100=10KPCS	=STANDARD B=1W R=2W

■DIMENSION



①	镀铜锡铁帽 Steel Termination Cap	④	绕线 Wire wound
②	色码 Color Code Rings	⑤	高含氧化铝瓷棒 Alumina Ceramic Rod
③	绝缘涂料 Insulation Coating		

TYPE	SIZE	L	Φd	K	A	B
WR0207	0207	5.9±0.2	2.2±0.2	0.8±0.05	0.12±0.05	0.15±0.05
WR0309	0309	8.5±0.2	3.0±0.2	1.4±0.10	0.20±0.10	0.20±0.10
WR0411	0411	10.8±0.2	4.3±0.2	2.5±0.10	0.30±0.20	0.30±0.20

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■ Standard Electrical Specifications

SIZE	VALUE RANGE	TIGHTEST TOLERANCE	BEST TCR (ppm/°C)	POWER	Operating Temp. Range	MAX Operating Voltage-MAX Overload Voltage
WR0207	0.1Ω~100Ω	5% / ±1%	±400PPM	1/2W	-55~+155°C	200V~250V
WR0309				1W	-55~+155°C	250V~300V
WR0411				2W	-55~+155°C	300V~350V

■ High Power Rating Electrical Specifications

SIZE	VALUE RANGE	TIGHTEST TOLERANCE	BEST TCR (ppm/°C)	POWER	Operating Temp. Range	MAX Operating Voltage-MAX Overload Voltage
WR0207	0.1Ω~100Ω	5% / ±1%	±400PPM	1W	-55~+155°C	200V~250V
WR0309				2W	-55~+155°C	250V~300V
WR0411				3W	-55~+155°C	300V~350V

Operating Voltage= $\sqrt{P \times R}$ or Max. Operating voltage listed above, whichever is lower.

Overload Voltage= $2.5 \times \sqrt{P \times R}$ or Max. Overload voltage listed above, whichever is lower.

■ 测试标准参考/Reference Standards: JIS-C 5202

■ 储存环境条件/ Storage Temperature: 25±3°C; Humidity < 80% RH

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■测试步骤和要求/ Environmental Characteristics

测试项目/ Item	测试要求/Requirement	测试步骤/ Test Method
电阻温度系数试验 Temperature coefficient	As Spec.	-55℃~+125℃, 25℃ is the reference temperature.
短时间过附载试验 Short Time Overload	$\pm(0.5\%+0.05\Omega)$	RCWV* $\times 2.5$ or Max. Overload voltage for 5 seconds.
耐湿负载试验 Damp Heat with Load	$\pm(1.0\%+0.05\Omega)$	40 $\pm 2^\circ\text{C}$, 90~95% R.H. Max. Working voltage for 1,000 hrs. with 1.5 hrs. "ON" and 0.5 hrs. "OFF".
寿命负载试验 Endurance	$\pm(1.0\%+0.05\Omega)$	70 $\pm 2^\circ\text{C}$, Max. Working voltage for 1,000 hrs. with 1.5 hrs. "ON" and 0.5 hrs. "OFF".
弯曲端子强度试验 Bending Strength	$\pm(0.5\%+0.05\Omega)$	Bending once for 5 seconds with 2mm.
焊锡性试验 Solder ability	95% min. coverage	245 $\pm 5^\circ\text{C}$ for 3 seconds.
焊锡耐热性试验 Resistance to soldering heat	($\pm 0.5\%+0.05\Omega$)	260 $\pm 5^\circ\text{C}$ for 10 seconds
绝缘耐压试验 Voltage Proof	No breakdown or flashover	0207 350V, 0309 500V for 1 minute.
绝缘电阻试验 Insulation Resistance	>1,000M Ω	0207 350V, 0309 500V for 1 minute.

* RCWV(Rated continuous working voltage)= $\sqrt{P \cdot R}$ or Max. Operating voltage whichever is lower/额定工作电压

■POWER DERATING CURVE

