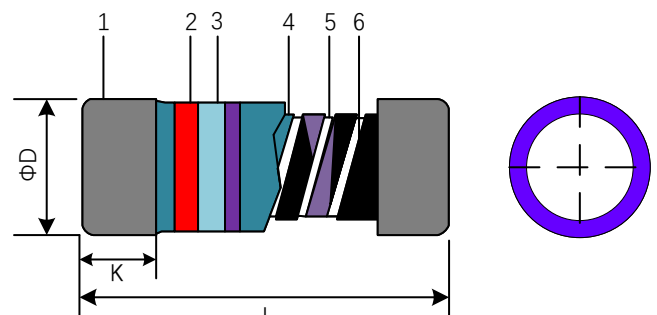


**线绕电阻器 – BRW 系列**  
**Wire Wound Resistor – BRW Series**
**特征 / Features**

- 使用不燃性涂料，具不燃与绝缘之安全特性
- 抗浪涌性能好
- 短路时电阻瞬间熔断
- 耐热性佳，表面温升低
- 符合无铅 (Pb) 和含铅焊接工艺要求
- 无引线系列，可用于自动表面贴装(SMD)装配系统。它们适于通过波峰焊、回流焊进行自动焊接
- 每一个电阻均通过5秒短时间过载测试。(负载电压为2.5倍额定工作电压或最大短时间过载压)
- Flameproof and insulating coating designed to assure safe usage by special non-flammable silicon-base
- Perfect surge-proof
- Resistance fusing instantaneously when short-circuit
- 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.

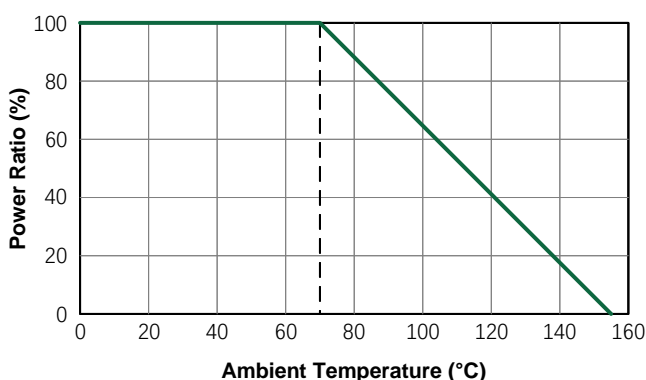

**外型尺寸 / Construction & Dimension**


1	镀铜锡铁帽 Steel Termination Cap
2	色码 Color Code Rings
3	绝缘涂料 Insulation Coating
4	绕线 Wire wound
5	切沟线 Trimming Line
6	高氧化铝瓷棒 Alumina Ceramic Rod

Type	L	ΦD	K	Packaging
	(mm)	(mm)	Min (mm)	
BRW0204	3.5±0.2	1.4±0.15	0.7	3000 (7")
BRW0207	5.9±0.2	2.2±0.2	0.8	2000 (7")
BRW0309	8.5±0.2	3.0±0.2	0.8	2500 (13")
BRW0411	10.5±0.5	4.1±0.3	0.8	1800 (13")
BRW0207 双帽	6.0±0.2	2.1±0.2	0.8	6500 (13")
BRW0309 双帽	8.8±0.2	3.4±0.2	1.0	2500 (13")
BRW0410 双帽	10.0±0.5	4.0±0.2	1.5	2000 (13")
BRW0411 双帽	11.0±0.5	4.5±0.2	1.5	1500 (13")

**应用 / APPLICATIONS**

- LED
- 通讯器材 Telecommunication
- 医疗电子设备 Medical equipment
- 测试量测设备 Measurement/Testing Equipment
- 汽车电子 Automotive
- 工业产品 Industrial

**功耗-温度曲线 / Derating Curve**


**产品编号和描述 / Part Number And Product Description**

BRW	0207	J	T	S	100	-DE
产品型号	尺寸 (L x ΦD)	电阻值 误差	包装方式标示	功率范围标示	电阻值 标示	端电极 标示
	0204: 3.5x1.4 0207: 5.9x2.2 0309: 8.5x3.0 0410: 10x4.0 0411: 11x4.0	F: ±1% G: ±2% J: ±5%	T: Taping Reel B: Bulk	-: Standard S: High Power SS: High Power	1R0: 1Ω 100: 10Ω 101: 100Ω	-: 单帽电极 -DE: 双帽电极

**技术规格 / Technical Specifications**

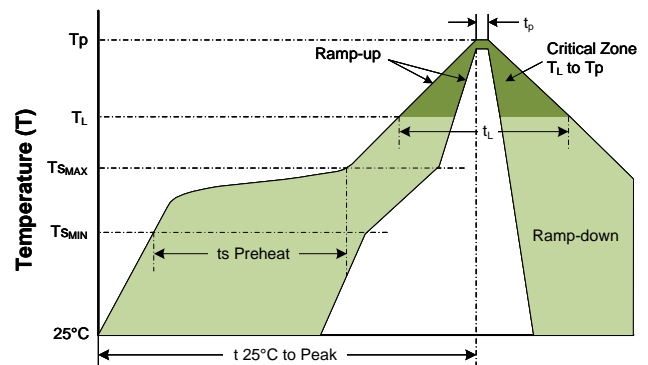
规格 Type	系列 Series	功率 Power @70°C	工作温度 Operating Temperature	阻值 Resistance	阻值精度 Tolerance	浪涌性能 Surge Capacity @1.2/50 & 8/20μs 10Hits
0204	深功率 S	1/4W	-55 ~ 155°C	1Ω ~ 20Ω	2%, 5%	≤5.1Ω: 300V >5.1Ω: 500V
	深功率 SS	1/2W				
0207	标准 Standard	1/4W	-55 ~ 155°C	1Ω ~ 100Ω	2%, 5%	≤5.1Ω: 700V >5.1Ω: 1000V
	深功率 S	1/2W				
	深功率 SS	1W				
0309	标准 Standard	1/2W	-55 ~ 155°C	1Ω ~ 100Ω	2%, 5%	≤5.1Ω: 1200V >5.1Ω: 1500V
	深功率 S	1W				
	深功率 SS	2W				
0410	深功率 S	2W	-55 ~ 155°C	1Ω ~ 150Ω	2%, 5%	≤5.1Ω: 2000V >5.1Ω: 2500V
	深功率 SS	3W				
0411	深功率 S	2W	-55 ~ 155°C	1Ω ~ 150Ω	2%, 5%	≤5.1Ω: 2000V >5.1Ω: 2500V
	深功率 SS	3W				

**性能 / Performances**

测试项目 / Test Item	测试要求 / Requirement	测试步骤 / Test Method	参考标准/ Standards
电阻温度系数试验 Temperature coefficient	$\leq  \pm 350 \text{PPM}/^\circ\text{C} $	$-55^\circ\text{C} \sim +125^\circ\text{C}$ , $25^\circ\text{C}$ is the reference temperature.	JIS C 5201 (4.8)
短时间过负载试验 Short Time Overload	$\pm(1\%R+0.05\Omega)$	Rated voltage $\times 2.5$ times for 5 seconds.	JIS C 5201 (4.13)
温度循环试验 Temperature Cycle	$\pm(1\%R+0.05\Omega)$	$-55^\circ\text{C}/30\text{min}$ , Room temp. 10-15min $-85^\circ\text{C}/30\text{min}$ , Room temp. 10-15min 5 cycles	JIS C 5201 (4.19)
断续过负载 Pulse Overload	$\pm(1\%R+0.05\Omega)$	Rated voltage $\times 2.5$ times, 10000 cycles (1s ON, 25s OFF)	SJ2865 (1.8.2)
耐湿负载试验 Damp Heat with Load	$\pm(5.0\%+0.05\Omega)$	$40\pm 2^\circ\text{C}$ , 90~95% R.H. Max. Working voltage for 1,000 hrs. with 1.5 hrs. "ON" and 0.5 hrs. "OFF".	JIS C 5201 (4.24)
寿命负载试验 Endurance	$\pm(5.0\%+0.05\Omega)$	$70\pm 2^\circ\text{C}$ , Max. Working voltage for 1,000 hrs. with 1.5 hrs. "ON" and 0.5 hrs. "OFF".	JIS C 5201 (4.25)
焊锡性试验 Solder Ability	95% min. coverage	$260\pm 10^\circ\text{C}$ for 3 seconds.	JIS C 5201 (4.17)
焊锡耐热性试验 Resistance to soldering heat	$(\pm 1\%+0.05\Omega)$	$350\pm 10^\circ\text{C}$ for 10 seconds	JIS C 5201 (4.18)
绝缘耐压试验 Voltage Proof	No breakdown or flashover	500V for 1 minute.	JIS C 5201 (4.7)
绝缘电阻试验 Insulation Resistance	$>1,000\text{M}\Omega$	500V for 1 minute.	JIS C 5201 (4.6)

**焊接参数 / Soldering Parameters**

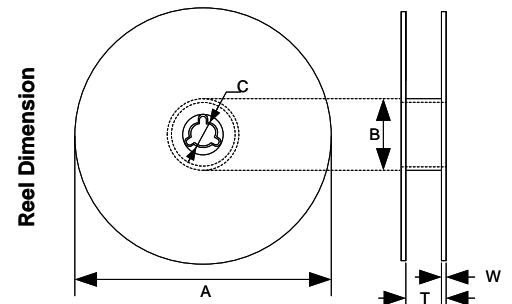
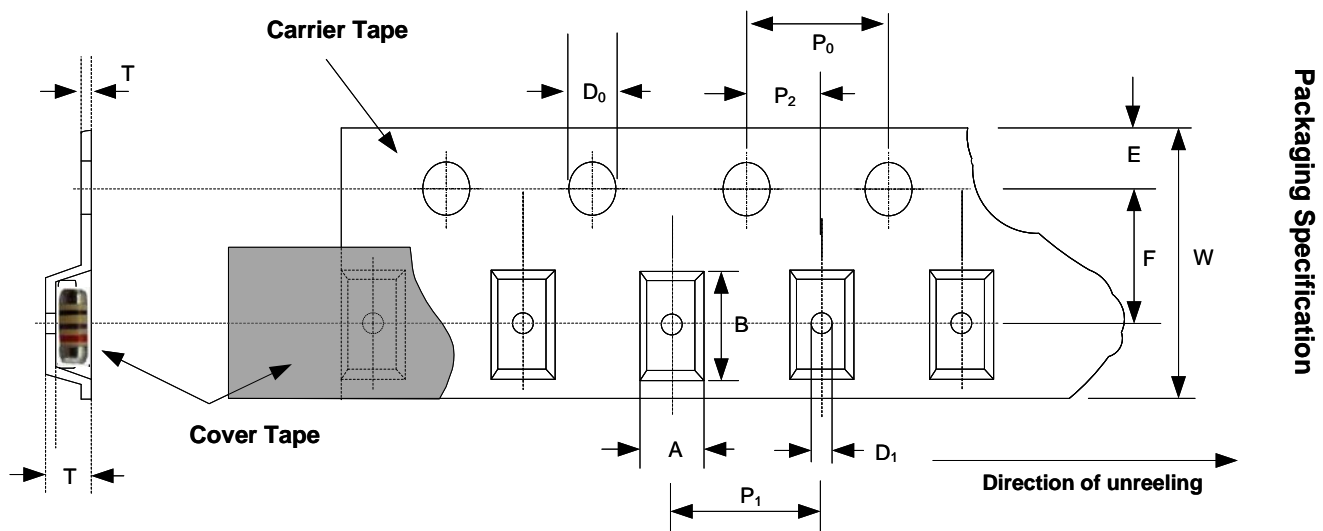
Profile Feature	Lead-Free Assembly
Average Ramp-up Rate ( $T_{\text{SMAX}}$ to $T_p$ ) Average Ramp-down Rate ( $T_p$ to $T_L$ )	$3^\circ\text{C}/\text{second max.}$ $6^\circ\text{C}/\text{second max.}$
<b>Preheat</b> • Temperature Min ( $T_{\text{SMIN}}$ ) • Temperature Max ( $T_{\text{SMAX}}$ ) • Time ( $t_s$ Preheat)	$150^\circ\text{C}$ $200^\circ\text{C}$ 60-180 seconds
<b>Time maintained above:</b> • Temperature ( $T_L$ ) • Time ( $t_L$ )	$217^\circ\text{C}$ 60-150 seconds
<b>Peak/Classification Temperature</b> • Temperature ( $T_p$ )	$260^{+0/-5^\circ}\text{C}$
<b>Time within <math>5^\circ\text{C}</math> of actual Peak</b> Time ( $t_p$ )	20-40 seconds
<b>Time <math>25^\circ\text{C}</math> to peak Temperature</b>	8 minutes max
<b>Do not exceed</b>	$280^\circ\text{C}$


**Flow/Wave Soldering (Solder Dipping)**

Peak Temperature :	$265^\circ\text{C}$
Dipping Time :	10 seconds
Soldering :	1 time

**包装/ Packaging**
**包装数量和卷轴规格尺寸 / Packaging Quantity & Reel Specifications**

Type	A	B	C	W	T
0204单帽	178.5±1.5	60±1.0	13±0.5	13±0.5	15.5±0.5
0207单帽					15.5±0.5
0207双帽	330±1.5	100±1.0	13±0.5	17±0.5	19±0.5
0309单/双帽					19±0.5
0410双帽					19±0.5
0411单帽					19±0.5
0411双帽					19±0.5


**载带规格尺寸 / Emboss Plastic Tape Specifications**


Type	A	B	W	E	F	P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	D <sub>0</sub>	T
0204	1.60±0.1	3.70±0.1	8.0±0.1	1.75±0.1	3.50±0.1	4.00±0.1	4.00±0.1	2.00+0.05	1.50±0.1	2.50±0.1
0207	2.40±0.1	6.30±0.1	12.0±0.1	1.75±0.1	5.50±0.1	4.00±0.1	4.00±0.1	2.00+0.05	1.50±0.1	2.50±0.1
0309	4.00±0.1	9.00±0.1	16.0±0.3	1.75±0.1	7.50±0.1	4.00±0.1	8.00±0.1	2.00+0.05	1.50±0.1	3.30±0.1
0410	4.40±0.1	11.30±0.1	16.0±0.3	1.75±0.1	7.50±0.1	4.00±0.1	8.00±0.1	2.00+0.05	1.50±0.1	4.40±0.1
0411	4.40±0.1	11.30±0.1	16.0±0.3	1.75±0.1	7.50±0.1	4.00±0.1	8.00±0.1	2.00+0.05	1.50±0.1	4.40±0.1
0411 双帽	4.80±0.1	12.00±0.1	16.0±0.3	1.75±0.1	7.50±0.1	4.00±0.1	8.00±0.1	2.00+0.05	1.50±0.1	4.40±0.1

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Specifications are subject to change without notice.

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