

# 东莞市安伏特电子有限公司

Dongguan Ampfort Electronics Co., Ltd.

## 产品规格书

(APPROVAL SHEET)

客户名称 Client				
品名 Description	SMD Wirewound Resistor(0207、0309、0411)			
规格 Specification				
料号 Part No				
生产方	工艺审核 TECHNICAL	品质审核 QUALITY	项目审核 PROJECT	开发审核 DEVELOPING
客户方	工艺审核 TECHNICAL	品质审核 QUALITY	项目审核 PROJECT	开发审核 DEVELOPING

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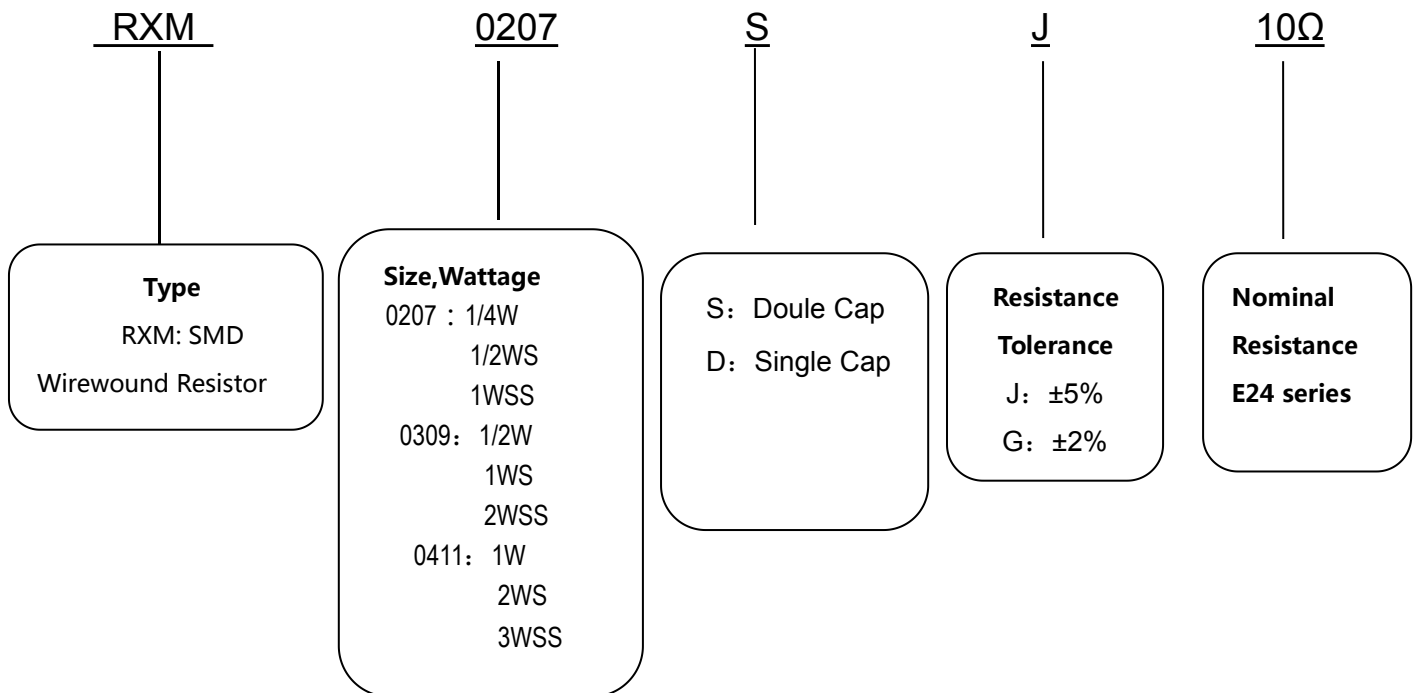
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### 1.适用范围 Applicable Scope

此基准是供应充电器、节能灯、电源供应器等用之不燃性涂装型绕线电阻器之规格。  
Applicable Scope: This benchmark is the supply of chargers, power supply, and other energy-saving lamps used in the coating are incombustibility wound resistor type of specifications.

### 2.形名 Part Number

依据其种类、额定电力、端子形状、公称电阻值及容许误差等分别注明。  
It is composed by Type, Rated Wattage, Terminal Form, and Nominal Resistance and Tolerance.e.g.



#### 2-1.种类 Type

绕线型精圆电阻器以 RXM 表示之。  
Wire Wound ME is called "RXM"

#### 2-2. 额定电力 Rated Wattage

额定电力(W)以数字表示, 如 1WS。  
Shown by "W", such as 1WS.

#### 2-3.标称电阻值 Nominal Resistance Value:

Ω为单位,依据 JIS-C6402 为适用原则(E-24 Series)。

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$\Omega$  are its unit which is in accordance with JIS-C6402(E-24)series.

### 2-4.电阻值及容许误差 Tolerance

在室温中依检测器测量,应在指定电阻值之容许误差以内。

It is measured by Bridge-method at room temperature and expressed by a capital letter.

F  $\pm$  1%    G  $\pm$  2%    J  $\pm$  5%

### 2-5.镍铬或康铜等合金线 Nickel Chrome or nickel an copper alloy.

## 3. 额定电力 Rated power

额定电力是周围温度 70°C以下可连续使用之负载电力最大值数,且应使机械性能与电气性能满足。又周围温度超越上记温度时,依照图一之电力轻减曲线而定。

Rated power is the value of Max load voltage specified at the ambient temperature of 70°C and shall

meet the functions of electrical and mechanical performance. When the ambient temp.surpasses above Mentioned temperature. The value declines as following

### DERATING CURVE:

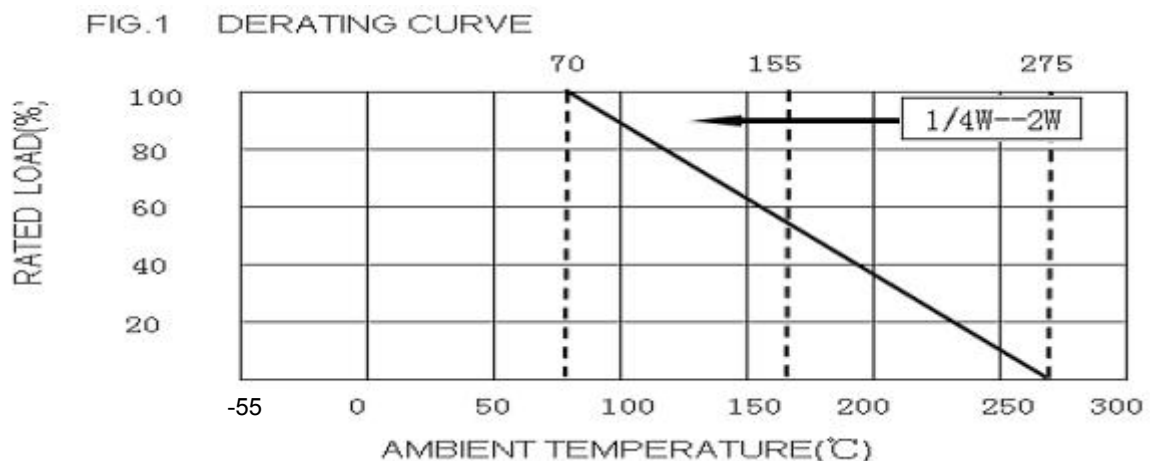


图 1: 负载减轻曲线

### 3-1.额定电压 Rated Voltage

依公式  $E = \sqrt{RP}$  求出连续使用额定电压,如额定电压超出最高使用电压,则以最高使用电压为连续使用额定电压

It is calculated as the following formula  $E = \sqrt{RP}$

However, in case the voltage calculated exceeds the maximum load voltage,

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such the maximum load. Voltage shall be regarded as its rated voltage, means whichever less.

E=连续使用额定电压

E=Rated Continuous Working Voltage(V)

P=额定功率

P=Rated Power(W)

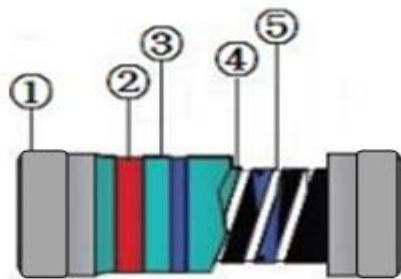
R=公称电阻值

R=Nominal Resistance Value( $\Omega$ )

### 3-2 备注

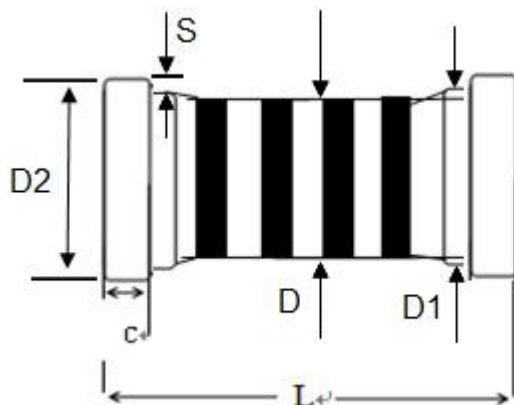
RXM 阻抗范围  $1\Omega$ - $100\Omega$

## 4. 构造 Constructoion



1. 端子 (Terminal)
2. 标示 (Nonflame paint with solvent-proof)
3. 绝缘涂层 (Insulation coating)
4. 基体 (Matrix)
5. 绕线 (Wire wrapping)

## 5. 定格及尺寸 Specifications



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Type	Dimension(mm)					
	L	D Max	D1 Max	D2 Max	S	C
0207	6.1±0.3	2.5	2.1	2.6	0.2±0.05	1.2±0.1
0309	8.9±0.3	3.4	2.9	3.45	0.2±0.05	1.6±0.1
0411	11±0.5	4.6	4	4.7	0.25±0.05	1.85±0.1

备注： L 为双帽总长度，D 为涂漆的厚度，D1 为内帽总高度，D2 为外帽总高度，S 为铁帽的厚度，C 为外帽的宽度。

### 6.机械性能 Mechanical Performance

#### 6-1.端子拉力强度 Terminal Tensile

将电阻本体一端固定,另一端向电阻体轴方向,慢慢加重至 2.5Kg 后,保持 10 秒钟,本体不得脱落或松动。

Fixing the resistor body, a static load of 2.5Kg is to be gradually applied into the terminal for

10seconds without causing any looseness and fall.

### 7.使用温度:Operating Temperature Range

-55°C ~ 275°C以内

### 8.电气特性 Electrical Performance

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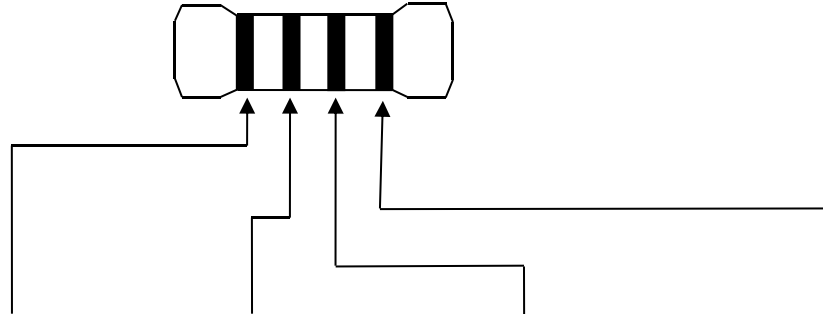
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项目 Item	规格值 Specifications	试验方法 Test methods (JIS C5201、GB/T 5729)
抵抗值 DC Resistance	须在规定之 R 值的容许差内 Allowed under R rate tolerance	 HM-9330
绝缘耐压 Dielectric Strength Test	涂装不可损坏, 绝缘不可破坏 No evidence of flashover or mechanical damage action insulation breakdown	电阻体置于 V 型槽上, 使用 300V 电压 加压 60 秒 Resistance body placed in the v-groove, use 350 V voltage pressure 60 seconds
可焊性 Solder ability	端子表面积 95%以新焊锡所 覆盖为原则 95% Surface of terminal covered solder	浸入 270°C ±10°C的锡炉, 5 秒 Into the tin stove 270 °C ± 10 °C, 5s
耐焊接热 Resistance to soldering Heat	±(1%+0.05Ω)以内 within ±(1%+0.05Ω)	浸入 260°C ±5°C的锡炉, 5~10 秒 Into the tin stove 260 °C ± 5 °C, 5~10s
短时间过负载 Short time over load	±(2%+0.05Ω)以内 ±(2%+0.05Ω) Less than	额定功率 2.5 倍测试 5 秒 2.5Times rated voltage for 5s
负载寿命 Load Life	±(5%+0.05Ω)以内 Within ±(5%+0.05Ω)	70°C1000 小时 额定电压(90 分钟 ON,30 分钟 OFF) 70°C1000h Rated voltage
耐溶剂性 Resistance to solvent	涂漆及色码无脱落 No deterioration of protective coating and markings	放入稀释剂中 3 分钟 Add thinner in 3min
不燃性 Incombustibility	无出现火焰 No evidence of flame	UL1412 标准 UL1412 standard
熔断特性 Fusing character tic	60 秒内熔断 Fusing time is within 60s	恒流 A, 熔断电流 = $\sqrt{R \times P \times \text{倍数} / R}$ Rated power x 倍数

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### 9. 色码表示 Color Coding



Color 颜色	第一条 1st the significant	第二条 2nd significant	倍数 Multiplier	误差 Error
Black 黑	0	0	$10^0$	
Brown 棕	1	1	$10^1$	$\pm 1\%(F)$
Red 红	2	2	$10^2$	$\pm 2\%(G)$
Orange 橙	3	3	$10^3$	
Yellow 黄	4	4	$10^4$	
Green 绿	5	5	$10^5$	
Blue 蓝	6	6	$10^6$	
Violet 紫	7	7		
Grey 灰	8	8		
White 白	9	9		
Golden 金			$10^{-1}$	$\pm 5\%(J)$
Silver 银			$10^{-2}$	$\pm 10\%(K)$

注:Note 本体面漆: 涂灰色不燃性绝缘漆。 Body coating Grey

### 10. 注意事项 Requirents In Use

1. 湿气会使电极之焊锡劣质化,保持场所在温度 40°C以下,湿度 70%以下。  
In the high humidity situation, it will make the solder ability worst. please preserve the resistors in 40°C ,70 rh below
2. 尽量不要打开最小包装。  
Please don't open the mine package when you preserve it
3. 周围温度高时按照负荷减轻曲线图减少规定使用电力。  
When in the high temperature situation, please accord to the picture of "power

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derating curve” reduce the use of power rating

4. 尽量不要将多个电阻并列或直列连结, 而以大电压或大电流使用。

You should avoid the connector of resisatnce replaced by latge voltage and power

5. 由于不燃性涂料承受外部冲击力较弱, 故在各种处置中应减少对电阻体的碰撞。

As the paint is not subject to external shocks incombustibility less, it should be disposed of in a variety of reducing the body's resistance collision

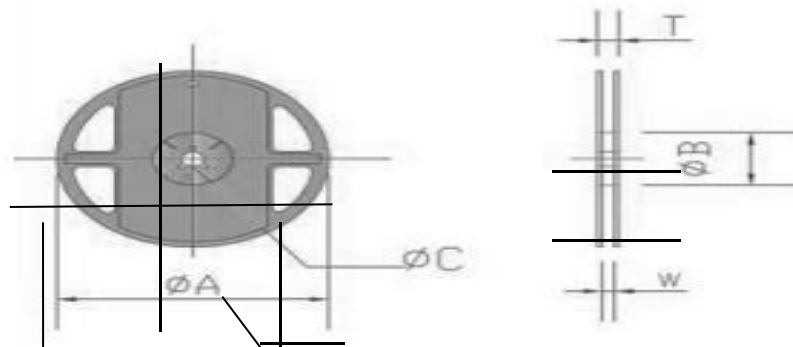
6. 清洗后, 外涂绝缘漆多少会弱化, 然后自然放置后可复元其强度,所以洗净后 20 分钟内不要让电阻皮膜与任何品之接触。

After cleaning the body, it will make the film weaker. but if you let it nature dry without touching or painting anything, the resistors will ecower its strength by 20 minutes

7. 电阻为发热性零件, 所以在使用中电阻间不应相互排列过密或接近其他发热零件,而妨碍其散热性, 必要时应增加散热装置。

The resistors are requested not to place by the other heating accessorie, which will obstruct their heat dissipation , necessary to increase cooling device

### 11. 包装卷轴规格尺寸 Packaging reel sizes



Unit:mm

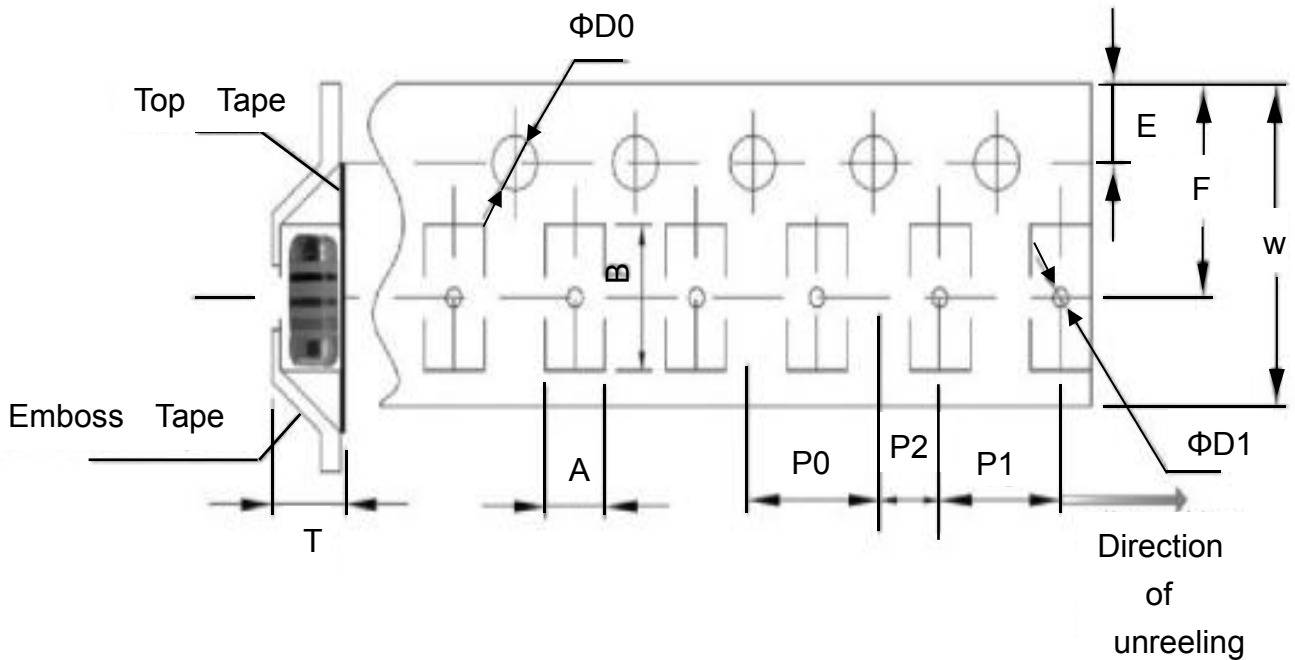
Type	ΦA	ΦB	ΦC	W	T	Bmboss Plastic Tape(EA)
0207	178.5±1.5	60.0+1.0	13.0±0.5	13.0 + 0.5	15.5±0.5	2,000(7.0") 7,000(13")
0309	330±1.5	100.0+1.0	13.0±0.5	17.0±0.5	19.0±0.5	2,500(13")
0411	330±1.5	100.0+1.0	13.0±0.5	25.0±0.3	27.0±0.5	2,000(13")



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### 12. 载带规格尺寸 With the sizes



Tape	A	B	W	E	F	P0	P1	P2	ΦD0	T
0207	2.6±0.10	6.40±0.1	12.0±0.1	1.75±0.1	5.50±0.05	4.00±0.10	4.00±0.10	2.00±0.05	1.50+0.10	2.6±0.10
0309	3.40±0.20	9.10±0.10	16.0±0.30	1.75±0.10	7.5±0.10	4.00±0.10	8.00±0.10	2.00±0.05	1.50+0.10	3.40±0.20
0411	4.80±0.10	12.20±0.10	24.0±0.30	1.75±0.10	11.5±0.10	4.00±0.10	8.00±0.10	2.00±0.10	1.50+0.10	4.80±0.10

### 13. 版本变更记录 (Version change records)

日期 Date	料号 P/N.	规格 P/N	变更内容 Changes	变更前 Before the change	变更后 After the change
2019-05-28		RXM 0207S—0309S—0411S			初次发行 First Made