



## 1.SPECIFIC REFERENCE DATA

| DESCRIPTION                          |                               | VALUE  | TEST CONDITIONS   |
|--------------------------------------|-------------------------------|--|---|
| Capacitance<br>容量                    | Rated Capacitance<br>标称值      | 0.1uF、0.01uF   | Measuring frequency: 1kHz±10%<br>Measuring voltage: 1Vms.max.   |
|                                      | Capacitance tolerance<br>容量误差 | K=±10%   |   |
| Voltage<br>电压                        | Rated voltage<br>额定电压         | 300VAC   | 4.3*UR Unit:VDC (1 minute at 20°C)  |
|                                      | Voltage proof<br>耐电压          | 无永久性击穿及飞弧  |   |
| Resistance                           | 电阻阻值                          | 120 Ω  |   |
| Insulation resistance<br>绝缘电阻 (仅指串联) |                               | C ≤ 0.33uF IR ≥ 15000M Ω<br>C > 0.33uF IR * C ≥ 5000S  | measured at rated voltage or less than 100VDC<br>1 minute at 20°C and RH ≤ 65%  |
| Endurance<br>耐久性                     |                               | Δ C/C ≤ 10%;<br>Δ DF ≤ 0.8% (C ≤ 1uF)<br>Δ DF ≤ 0.5%; (C > 1uF)<br>IR ≥ 50% of the specified value (标称值) | 1000 hours with 125% of rated voltage at 85°C.  |
| Climatic catalogue<br>气候类别           |                               | 40/100/21  |   |
| Solder ability<br>可焊性                |                               | Solder should cover at least 75% of the circumference of the lead<br>浸没部分引脚需有 75%以上面积挂上锡                 | solder bath : 235 ± 5°C<br>bath time: 2.0 ± 0.5 sec<br>speed: 25 ± 6 mm/sec<br>depth: 1.5 + 0.5 / - 0 mm from the bottom of the body              |
| Heat shock<br>耐焊接热                   |                               | Δ C/C ≤ ± 5%,<br>DF ≤ 1.2 * 规定值。<br>试验后电容器外观应无可见损伤,  | solder bath : 260 ± 5°C<br>bath time: 5.0 ± 0.5 sec<br>speed: 25 ± 6 mm/sec<br>depth: 1.5 + 0.5 / - 0 mm from the bottom of the body              |
| Lead tensile strength:<br>引脚拉伸强度     |                               | 外观无损伤  | Pull: 2.2 LBS<br>time: 5 sec  |
| Lead bending strength<br>引脚弯曲强度      |                               | 引脚无损伤  | Load of lead: 1.1 LBS<br>The body of capacitor is bent 90 degrees and returned to its original position   |
| Vibration<br>震动                      |                               | 外观无可见损伤  | Frequency cycle: from 10Hz to 55Hz and then 10Hz<br>Amplitude: 1.5mm in three directions<br>Time: 2 hours each directions with a total of 6 hours |
| Reference standard<br>引用标准           |                               | IEC 60384-14, EN60384-14   |   |

## 2.CONSTRUCTION:

|                                |  |  |
|--------------------------------|--|--|
| 2.1 Dielectric<br>介质           | polypropylene film<br>聚丙烯薄膜  |  |
| 2.2 Electrodes<br>电极           | vacuum evaporated metal<br>真空蒸镀金属  |  |
| 2.3 Coating<br>灌封              | Encapsulated in reinforced flame retardant plastic case sealed with epoxy resin meeting the requirement of-UL94V-0<br>(阻燃盒子并以环氧树脂灌封) |  |
| 2.4 Leads<br>导线                | Tinned Wire<br>or polyvinylchloride (PVC) insulation stranded copper wire<br>径向镀锡导线或绝缘导线   |  |
| 2.5 Resistance<br>电阻           | <b>Non-Inductive, high pulse resistor</b> (无感型, 耐脉冲电阻)   |  |
| 2.6 Terminal contact<br>引线连接方式 | electrically welded;<br>电弧点焊   |  |

## 3.SAFETY APPROVALS

RC -- (SERIES)

|  |                             |                |
|--|-----------------------------|----------------|
|  | CHINA 中国<br>GB/T14472-1998  | CQC03001002848 |
|  | 欧共体<br>EN132400 IEC60384-14 | SE/0364-1      |
|  | USA 美国<br>UL 1283           | E221606        |

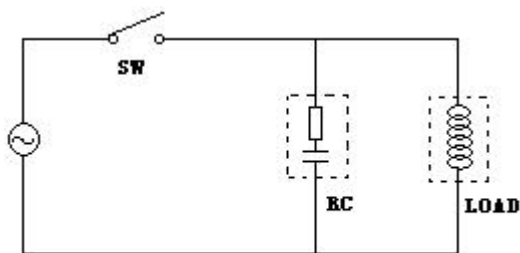
## 4.FEATURE:

- 小体积, 性能佳  
Small size with superior performance;
- 可安装于 PCB  
Suitable for PCB mounting ;
- 适用于交/直流  
Ideal for AC or DC application
- 多种电阻功率 1/4, 1/2 和 1 瓦特, 电容 0.001 $\mu$ F 至 1.0 $\mu$ F 供选择  
Large product selection range with 1/4, 1/2 and 1 watt resistors ,0.001 $\mu$ F to 1.0 $\mu$ F capacitance
- 可选软引线式、管状或盒子结构  
Providing flexible wire , tubular and box type on request.

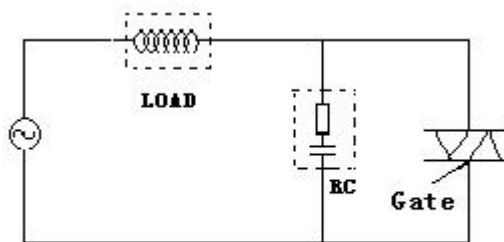
## 5.APPLICATION:

- 设备切换时，保护触点，消除火花及噪音  
Protection for contacts from noise during switching operations of equipment;
- 接触器、继电器、电机等操作时保护电子设备  
Protection of electronic instruments during operation of relays ,solenoids, motors and so on
- 消除晶闸管、电子体、电机、焊接机等半导体设备之电谐干扰  
Electrical noise protection of semiconductor equipment during the control of triacs, transistor, motors, welders, etc.

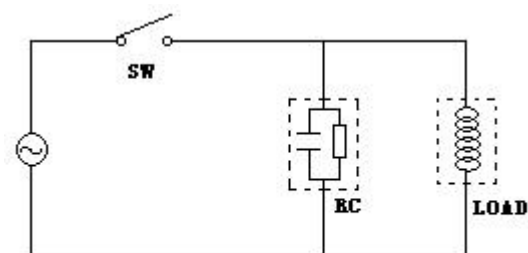
## 6.APPLICATION EXAMPLE



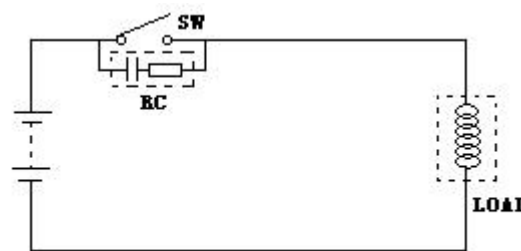
Normal application in AC circuits  
交流应用场合



In the circuits of SCR or TRIAC etc  
晶闸管、晶体管控制回路



Normal application in AC circuits  
交流应用场合



In DC circuits 直流回路

## 7.THE MARKING:

JIM SON  
RC 300VAC K  
0.1 $\mu$ F X2+120 $\Omega$   


内容 Those marking include:

- 生产商 Manufacturer: JIMSON
- 产品型号 Manufacturer's type designation: MRC
- 额定容量 Rated capacitance in uF, such as 0.1uF
- 容量偏差 Tolerance on rated capacitance: K=±10%
- 额定电压 Rated voltage (AC), such as 300VAC
- 气候类别 Climatic catalogue GMF
- 产品等级 Sub-class, such as X2
- 安规标志 Safety approvals: Products will be marked with all approvals which have been achieve.(show in Page2.)
- 引用标准 Reference standard: IEC60384-14。

## 7.HOW TO DESCRIBE JIMSON CAPACITOR

MRC      104              K              300VAC  
 type   capacitance   tolerance   rated voltage

■ **TYPE:**            RC

■ **容量 CAPACITANCE:**

产品的电容量用三位数字来表示，其中前两位数代表电容量的标称值，后一位表示电容量的指数值，亦即标称值后零的个数，单位为 PF。

The rated capacitance value of the product is indicated with three digits. The first two digits indicate the two most significant digits of capacitance value, and the third digit gives the number of following zeroes. This gives the capacitance value expressed in Pico farad.

For example:

10 2=10×10<sup>2</sup>pF=1000pF=1nF=0.001uF  
 15 3=15×10<sup>3</sup>pF=15000pF=15nF=0.015uF  
 22 4=22×10<sup>4</sup>pF=220000pF=220nF=0.22uF  
 33 5=33×10<sup>5</sup>pF=3300000pF=3300nF=3.3uF

■ **容量单位 CAPACITANCE UNIT:**

1F=1,000mF=1,000,000uF=1,000,000,000nF=1,000,000,000,000pF

■ **容量偏差符号 SYMBOL OF CAPACITOR TOLERANCE**

| SYMBOL     | B   | C   | D   | F   | G   | H   | I   | J   | K  | M  | N  | V   | Z   |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|-----|-----|
| TOLERANCE  | ±   | ±   | ±   | ±   | ±   | ±   | ±   | ±   | ±  | ±  | ±  | 20  | +80 |
| PERCENTAGE | 0.1 | 0.2 | 0.5 | 1.0 | 2.0 | 2.5 | 3.0 | 5.0 | 10 | 20 | 30 | -10 | -20 |
| %          |     |     |     |     |     |     |     |     |    |    |    |     |     |

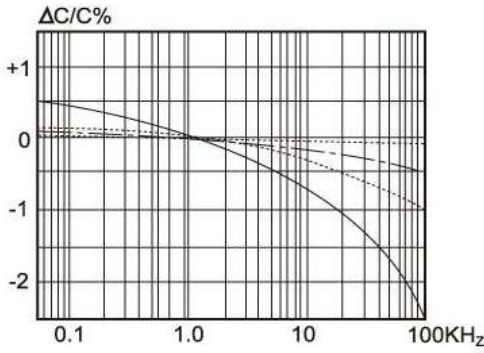
■ **额定电压符号 SYMBOL OF RATED VOLTAGE**

|   | A    | B    | C    | D    | E    | F    | G    | H    | J    | K    |
|---|------|------|------|------|------|------|------|------|------|------|
| 1 |      |      |      |      |      |      |      | 50   | 63   | 80   |
| 2 | 100  | 125  | 160  | 200  | 250  | 315  | 400  | 500  | 630  | 800  |
| 3 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 | 6300 | 8000 |

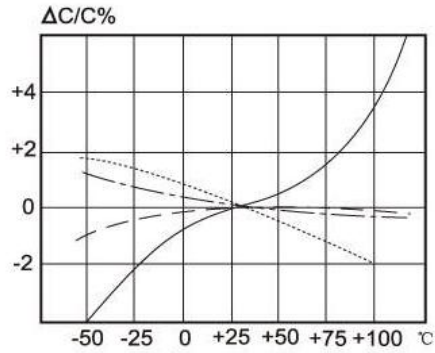
For example:

1J=63V;2E=250V;3D=2000V

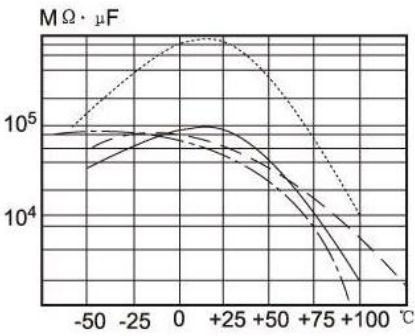
## 8. PROPERTIES OF CAPACITOR AND THE DIELECTRICS:



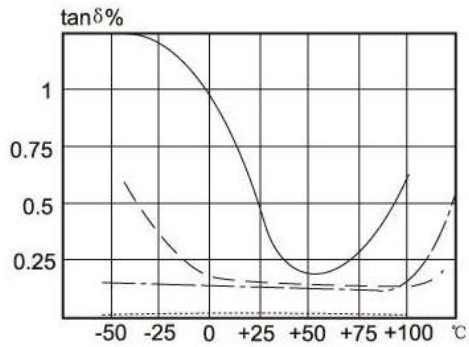
Capacitance vs. Frequency  
容量与频率



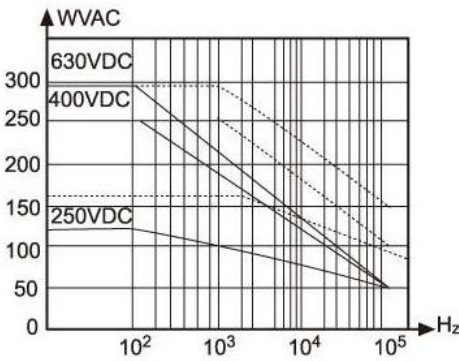
Capacitance vs. Temperature  
容量与温度



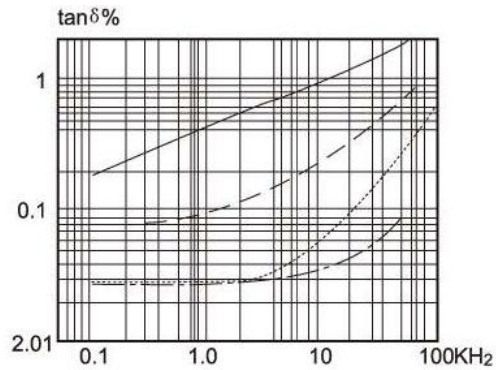
Insulation resistance vs. Temperature  
绝缘电阻与温度



Dissipation factor vs. Temperature  
损耗与温度



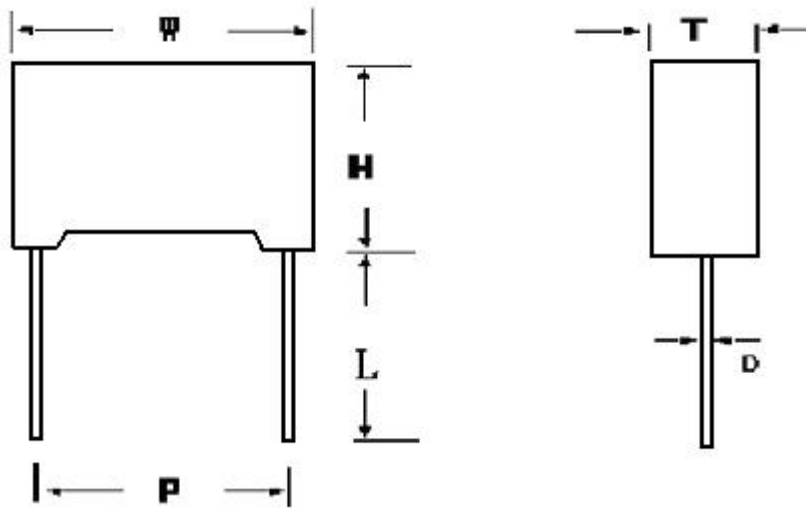
Working Voltage DC&AC vs. Frequency  
工作电压直流交流与频率



Dissipation factor vs. Frequency  
损耗与频率

|       |      |               |
|-------|------|---------------|
| ————— | 聚酯   | Polyester     |
| ..... | 聚丙烯  | Polypropylene |
| ————— | 聚碳酸酯 | Polycarbonate |
| ————— | 聚苯乙烯 | Polystyrene   |

**9. OUTLINE DRAWING:**



**10. DIMENSION:**

**Unit: mm**

| SYMBOL               | CAP   | RESIS | COLOR  | W<br>±0.5 | H<br>±0.5 | T<br>±0.5 | P<br>±1.0 | d<br>±0.05 | L<br>±0.5 |
|----------------------|-------|-------|--------|-----------|-----------|-----------|-----------|------------|-----------|
| RC104K300A12<br>(串联) | 0.1uF | 120Ω  | YELLOW | 18.0      | 12.0      | 6.0       | 15.0      | 0.6        | 3.8       |

| SYMBOL               | CAP    | RESIS | COLOR  | W<br>±0.5 | H<br>±0.5 | T<br>±0.5 | P<br>±1.0 | d<br>±0.05 | L<br>+5/-10 |
|----------------------|--------|-------|--------|-----------|-----------|-----------|-----------|------------|-------------|
| RC103K300A01<br>(串联) | 0.01uF | 120Ω  | YELLOW | 18.0      | 13.5      | 6.0       | 15.0      | 0.6        | 25.0        |

## 11.使用注意事项 Caution

### 焊接建议 Soldering Suggestion

为了达到更好的可焊性，建议按照下列的标准；

In order to achieve a better solderability, recommended in accordance with the following criteria

最大的焊接温度 Maximum Soldering Temperature

|                | T max | Time |
|----------------|-------|------|
| 预热 Pre-heating | 105℃  | 1min |
| 焊接 Soldering   | 270℃  | 4S   |

## 12.存储环境及条件 Storage Environment and Conditions

### 12.1 存储环境 Storage Environment

储存在温度 $\leq 30^{\circ}\text{C}$ ，湿度 $\leq 70\%$ 的情况下，MBB（Moisture Barrier Bag）未打开能够保证 24 个月的储存期。

In the storage temperature are less than 30, humidity less than 70% conditions, MBB（Moisture Barrier Bag）is not open to ensure that the storage period of 24 months.

### 12.2 存储条件 Storage Condition

由于大气中存在氯化物、硫化物、硫酸物质等，因此产品储存在空气中，引出端的可焊性会变差。

产品不能暴露在高温高湿状态，必须在 12 的存储环境条件下保存

Due to the presence of hydrogen chloride, hydrogen sulfide, sulfuric acid, etc. in the atmosphere, So the product is stored in the air, solderability of terminations will be poor.

Products can not be exposed to high temperature and high humidity condition, must be stored under 12 of the storage environment.

## 13.绿色产品 Green Products

符合 RoHS 标准 In compliance with RoHS

智新电子公司提供的产品均符合 RoHS 2.0 环保指令的要求

JIMSON ELECTRONICS CO., LTD Products are RoHS Compliant.

THE END



单击下面可查看定价，库存，交付和生命周期等信息

[>>Jimson\(智新\)](#)