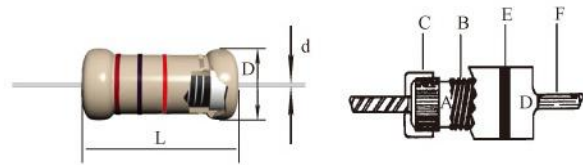




●特点 Features:

- 1、性能稳定、阻值范围广、体积小、工作温度和极限电压较高。Stable performance, extensive resistance, small size, high operating temperature and high ultimate voltage.
- 2、脉冲负荷适应性强、高频特性好。Highly adaptive pulse load, good high frequency performance.
- 3、使用环境温度 Operating ambient temperature: -55℃~+125℃.
- 4、本体涂漆颜色为土黄色，小型化涂漆颜色为棕色。The resistor's normal size coats yellow and the mini size coats brown.
- 5、阻值误差 Resistance tolerance: ±2%、±5%、±10%.

●产品结构图 Structural Drawing:



- A、高热传导瓷芯 High heat exchanged Ceramic core.
- B、高稳定性导电膜 High stability Electric conduction film.
- C、铁帽 Iron Cap.
- D、环氧树脂涂料 Epoxy resin coating.
- E、色环 Color Ring.
- F、镀锡铜线或镀锡铜包钢线 Tinned copper lead wire or CP lead wire.

●规格尺寸及耐压性能 Dimensions and Voltage Performance:

| 料号 Part No. | 功率 Power | 阻值范围 Resistance range | 尺寸 Dimensions(mm) | | | 最大工作电压 Max.working voltage | 最大负荷电压 Max.overload voltage | 最高脉冲电压 Max.Pulse voltage | 最高绝缘电压 Max.insulation voltage |
|------------------|--------------|--------------------------|-------------------|-------|--------|-------------------------------|--------------------------------|-----------------------------|----------------------------------|
| | | | L± | D±0.5 | d±0.05 | | | | |
| CCR016 CFR016 | 1/8W 1/6W | 0R~22M | 3.5 | 1.7 | 0.41 | 200V | 400V | 500V | 300V |
| CCR14S CFR14S | 1/4WS | 0R~22M | 3.5 | 1.7 | 0.41 | 200V | 400V | 500V | 300V |
| CCR014 CFR014 | 1/4W | 0R~22M | 6.0 | 2.3 | 0.45 | 250V | 500V | 750V | 500V |
| | | | | | 0.52 | | | | |
| CCR12S CFR12S | 1/2WS | 0R~22M | 6.0 | 2.3 | 0.45 | 250V | 500V | 750V | 500V |
| | | | | | 0.52 | | | | |
| CFR012 | 1/2W | 0R1~22M | 9.0 | 3.2 | 0.58 | 350V | 700V | 1000V | 700V |
| CFR01S | 1WS | 0R1~22M | 9.0 | 3.2 | 0.58 | 350V | 700V | 1000V | 700V |
| CFR01B | 1W | 0R1~22M | 11.0 | 4.5 | 0.75 | 500V | 1000V | 1000V | 1000V |
| CFR02S | 2WS | 0R1~22M | 11.0 | 4.5 | 0.75 | 500V | 1000V | 1000V | 1000V |
| CFR02B | 2W | 0R1~22M | 15.0 | 5.0 | 0.75 | 500V | 1000V | 1000V | 1000V |
| CFR03S | 3WS | 0R1~22M | 15.0 | 5.0 | 0.75 | 500V | 1000V | 1000V | 1000V |
| CFR03B | 3W | 0R1~22M | 24.0 | 8.0 | 0.75 | 700V | 1200V | 1200V | 1000V |
| CFR05S | 5WS | 0R1~22M | 24.0 | 8.0 | 0.75 | 700V | 1200V | 1200V | 1000V |

备注：a、功率后面的“S”表示小型化；

b、额定电压 = $\sqrt{\text{功率} \times \text{阻值}}$ ；

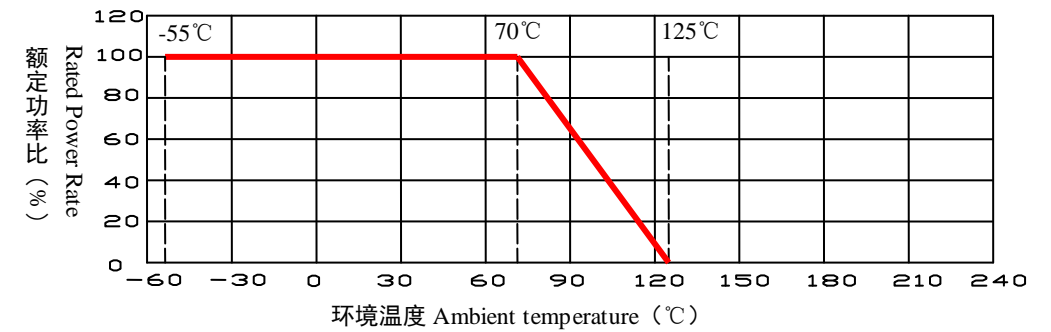
c、当计算得出的额定电压大于最大工作电压，使用时取二者较小值。

Note: a、“S”means mini size;

b、Rated voltage $V = \sqrt{\text{Power} \times \text{Resistance Value}}$;

c、If the calculated rated voltage is higher than the max. working voltage, it will be got the lower value.

●额定功率递减图 Rated Power Derating Curve:



●性能测试 Performance Test:

| 测试项目 Test Item | 测试条件 Test Condition | 性能 Performance |
|--------------------------------------|---|---|
| 温度系数 Temperature coefficient | 在常温及常温+100℃时分别测量电阻并计算每度的阻值变化率。Test the resistance value at normal temperature and normal temperature added 100℃, calculate per °C resistance value change rate. | ±1000ppm/°C |
| 短时间过负荷 Short time overload | 施加 2.5 倍额定电压或最高负荷电压 (取较小者) 5 秒。2.5 × rated voltage or Max. overload voltage (get the lower) for 5 seconds. | $\Delta R \leq \pm (1\%R_0 + 0.05\Omega)$ |
| 断续过负荷 Pulse overload | 4 倍额定电压或最高断续负荷电压 (取较小者) 测试 1 秒, 停止 25 秒, 循环 10000±200 次。At 4 × rated voltage or Max. pulse overload voltage (get the lower) cycle 10000±200 times (1 second on, 25 seconds off). | $\Delta R \leq \pm (2\%R_0 + 0.05\Omega)$ |
| 耐焊接热 Resistance to soldering heat | 在 350±10℃ 锡炉中浸入 2~3 秒。Immerse into 350±10℃ tin stove for 2~3 seconds. | $\Delta R \leq \pm (1\%R_0 + 0.05\Omega)$ |
| 可焊性 Solderability | 在 260±5℃ 锡炉中浸入 2~3 秒。Immerse into 260±5℃ tin stove for 2~3 seconds. | 焊锡面积覆盖 95% 以上 The area of soldering is over 95% |
| 温度循环 Temperature cycling | 在 -55℃ 时放置 30 分钟, 然后在 +25℃ 时放置 10~15 分钟, 然后在 +125℃ 时放置 30 分钟, 然后在 +25℃ 时放置 10~15 分钟, 共循环 5 次。At -55℃ for 30 min, then at +25℃ for 10~15 min, then at +125℃ for 30 min, then at +25℃ for 10~15 min, total 5 cycles. | $\Delta R \leq \pm (1\%R_0 + 0.05\Omega)$ |
| 耐湿负荷寿命 Load life in humidity | 在温度为 40±2℃, 相对湿度为 90~95% 的恒温恒湿箱中, 施加额定电压或最大工作电压 (取较小者) 共 1000 小时 (通 1.5 小时, 断 0.5 小时)。Overload rated voltage or Max. working voltage (get the lower) for 1000 hours (1.5 hours on and half-hour off) at the 40±2℃ and 90~95% relative humidity. | $\Delta R \leq \pm (5\%R_0 + 0.05\Omega)$ |
| 耐温负荷寿命 Load life in heat | 在 70±2℃ 恒温恒湿箱中施加额定电压或最大工作电压 (取较小者) 1000 小时 (通 1.5 小时, 断 0.5 小时)。Overload rated voltage or Max. working voltage (get the lower) for 1000 hours (1.5 hours on and half-hour off) at the 70±2℃. | $\Delta R \leq \pm (5\%R_0 + 0.05\Omega)$ |

●料号规则 Part No. Regulation:

| CFR | 01B | J | 0 | T520 | 100K0 |
|--|---|---|--------------------------|--|---|
| 产品名称 Product Name | 功率 Power | 精度 Tol. | 特殊码 Special Code | 成型 Forming | 阻值 Ohm |
| 碳膜固定电阻器 Carbon Film Fixed Resistors | 018=1/8W 016=1/6W 14S=1/4WS 014=1/4W 12S=1/2WS 012=1/2W 01S=1WS 01B=1W | 02S=2WS 02B=2W 03S=3WS 03B=3W 05S=5WS | G=±2% J=±5% K=±10% | T260=T26 T520=T52 T710=T71 M001=M F001=F B001=B | 0R100=0.1Ω 0R220=0.22Ω 10R00=10Ω 10K00=10KΩ 1M000=1MΩ |