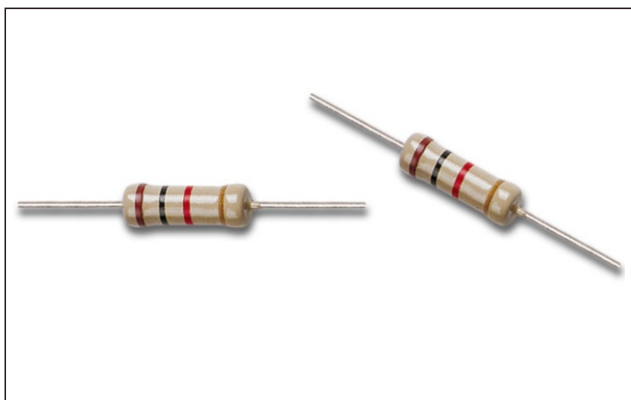


CFR碳膜固定电阻 Carbon Film Fixed Resistors



本体颜色: Body Color

标准品: Standard (Yellow 土黄色)

小型品: Small Type (Brick red 砖红色)

标示: Marking

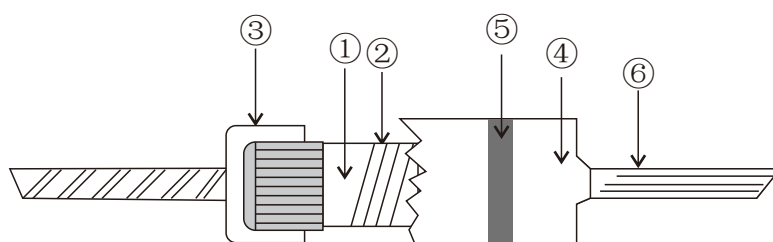
色环: Color Code (1/8W-5W)

(根据客户要求提供相应标识)

(According to the customer request to

provide corresponding identification)

产品结构图 Construction Drawing



①	②	③	④	⑤	⑥
高铝瓷芯	高稳定性导电膜	铁帽	环氧树脂涂料	色环	镀锡铜线
High AL ₂ O ₃	High Stability Electric Conduction Film	Iron Cap	Epoxy Resin Coating	Color Ring	Tinned copper lead wire

特性 Feature

(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。

High adaptive pulse load, good high frequency performance.

(3)使用环境温度-55℃~+125℃

Operating ambient temperature:-55℃~+125℃

(5)阻值误差:±2%、±5%、±10%。

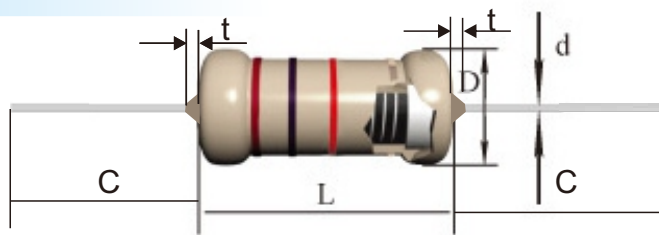
Resistance tolerance:±2%、±5%、±10%.

参考规格Reference Standards

JIS C 5201-1

CFR碳膜固定电阻 Carbon Film Fixed Resistors

● 外形尺寸 Dimensions



规格 Type	功率 Power	尺寸Dimensions(mm)				
		L±1	D±0.5	C±3	d±0.05	t Max
CFR012	1/6W	3.5	1.7	28	0.43	1.5
CFR25S	1/4WS	3.5	1.7	28	0.43	1.5
CFR25	1/4W	6.0	2.3	28	0.45	2.0
CFR50S	1/2WS	6.0	2.3	28	0.45	2.0
CFR50	1/2W	9.0	3.2	28	0.50	2.0
CFR100S	1WS	9.0	3.2	28	0.52	2.5
CFR100	1W	11.0	4.5	33	0.60	2.5
CFR200S	2WS	11.0	4.5	33	0.60	2.5
CFR200	2W	16.0	5.0	33	0.70	2.5
CFR300S	3WS	16.0	5.0	33	0.70	2.5
CFR300	3W	18.0	6.0	33	0.70	2.5
CFR500	5W	24.0	8.0	33	0.70	2.5

● 功率、阻值范围与耐电压 Power and Resistance etc

规格 Type	功率 Power	阻值范围 Resistance Range (Ω)	最大使用电压 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. Insutation voltage
CFR012	1/6W	0R~22M	200V	400V	500V	300V
CFR25S	1/4WS	0R~22M	200V	400V	500V	300V
CFR25	1/4W	0R~22M	250V	500V	750V	500V
CFR50S	1/2WS	0R~22M	250V	500V	750V	500V
CFR50	1/2W	0R1~22M	350V	700V	1000V	700V
CFR100S	1WS	0R1~22M	350V	700V	1000V	700V
CFR100	1W	0R1~22M	500V	1000V	1000V	1000V
CFR200S	2WS	0R1~22M	500V	1000V	1000V	1000V
CFR200	2W	0R1~22M	500V	1000V	1000V	1000V
CFR300S	3WS	0R1~22M	500V	1000V	1000V	1000V
CFR300	3W	0R1~22M	700V	1200V	1200V	1000V
CFR500	5W	0R1~22M	700V	1200V	1200V	1000V

备注Note:

a、功率后面的"S"表示小型化,"S"means small size.

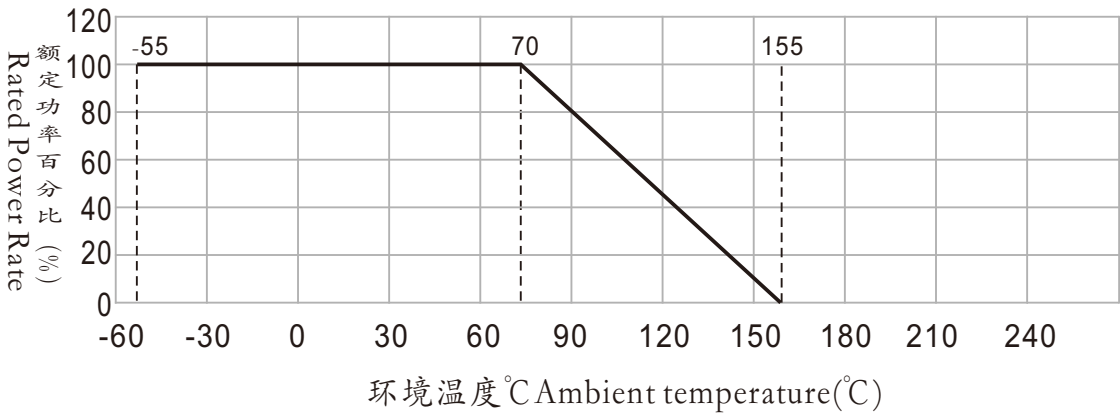
b、额定电压 Rated voltage= $\sqrt{\text{功率Power} \times \text{阻值Resistance Value}}$

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。

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

CFR碳膜固定电阻 Carbon Film Fixed Resistors

● 降功耗曲线 Derating Curve



● 性能 Performance

试验项目 Test Items	性能 Performance	试验方法 Test Methods(JIS C 5201-1)
温度系数 Temperature coefficient	$\pm 1000\text{ppm}/^{\circ}\text{C}$	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 resistance value at normal temperature and normal temperature added 100℃, calculate $^{\circ}\text{C}$ resistance value change rate.
短时间过负荷 Short time overload	$\Delta R \leq \pm (1\%R_0 + 0.05\Omega)$	施加2.5倍额定功率或最高负荷电压（取较小者）5秒 2.5X rated power or Max. overload voltage(get the lower) for 5seconds.
断续过负荷 Pulse overload	$\Delta R \leq \pm (2\%R_0 + 0.05\Omega)$	4倍额定功率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 4Xrated power or Max. pulse overload voltage(get the lower)cycle 10000±200 times(1second on 25 seconds off)
耐焊接热 Resistance to soldering heat	$\Delta R \leq \pm (1\%R_0 + 0.05\Omega)$	在350±10℃的锡炉中浸入2~3秒。 Immerge into the 350±10℃ tin stove for 2~3 seconds
可焊性 Solderability	焊锡面积覆盖率95%以上 Tth soldering area is over 98%	在245±3℃的锡炉中浸入2~3秒。 Immerge into the 245±3℃ tin stove for 2~3 seconds
温度循环 Temperature cycle	$\Delta R \leq \pm (1\%R_0 + 0.05\Omega)$	在-55℃时放置30分钟，然后在+25℃时放置10~15分钟，然后再在+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 30min, then at +25℃ for 10~15min, then at +125℃ for 30min, then at +25℃ for 10~15 min, total 5cycles.
耐湿负荷寿命 Load life in humidity	$\Delta R \leq \pm (5\%R_0 + 0.05\Omega)$	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 1000hours(1.5hours on and half-hour off) at the 40±2℃ and 90~95% relative humidity.
耐温负荷寿命 Load life in heat	$\Delta R \leq \pm (5\%R_0 + 0.05\Omega)$	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）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 1000hours(1.5hours on and half-hour off) at the 70±2℃.

● 料号编号 ordering Information

例 example

CFR	01B	F	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
CFR碳膜固定电阻 Carbon Film Fixed Resistors	012=1/6W, 25=1/4W 25S=1/4WS, 50=1/2W 50S=1/2WS, 100=1W 100S=1WS, 200=2W 200S=2WS, 300=3W 300S=3WS, 500=5W	G=±2% J=±5% K=±10%		T260=T26 T250=T25 T710=T71 M001=M F001=F B001=B	0R100=0.1Ω 0R220=0.22Ω 10R00=10Ω 10K00=10KΩ 1M000=1MΩ
CFR:铜引线Copper lead wire					