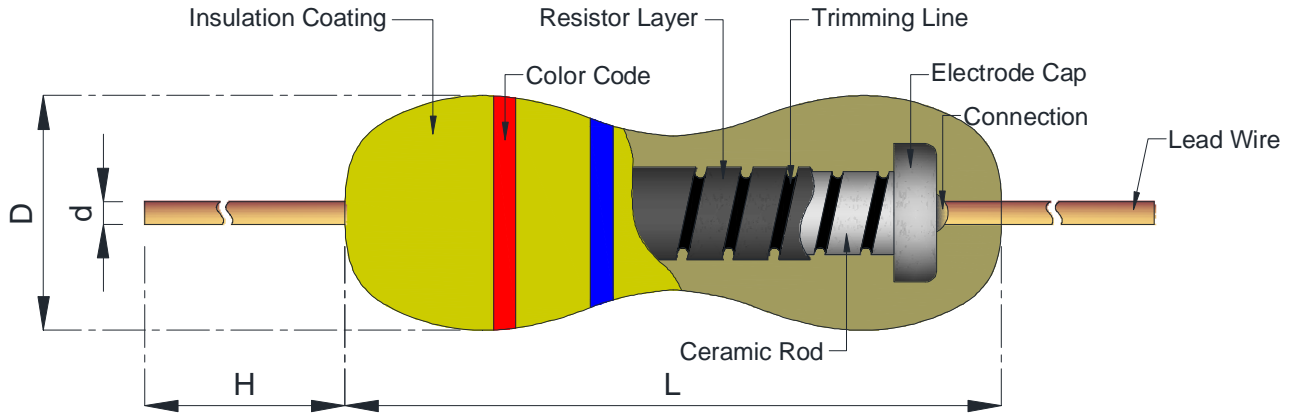


● **PRODUCT FEATURES :**

1. LOWEST COST , PROMPT DELIVERY
2. EXCELLENT LONG TERM STABILITY
3. WIDE RESISTANCE RANGE 0Ω 22~22MΩ
4. POWER RATINGS

● **POWER RATINGS DIMENSIONS**

- ⊙ Standard Type: 1/8W ~2W
- ⊙ Miniature Type: 1/4Ws~3Ws

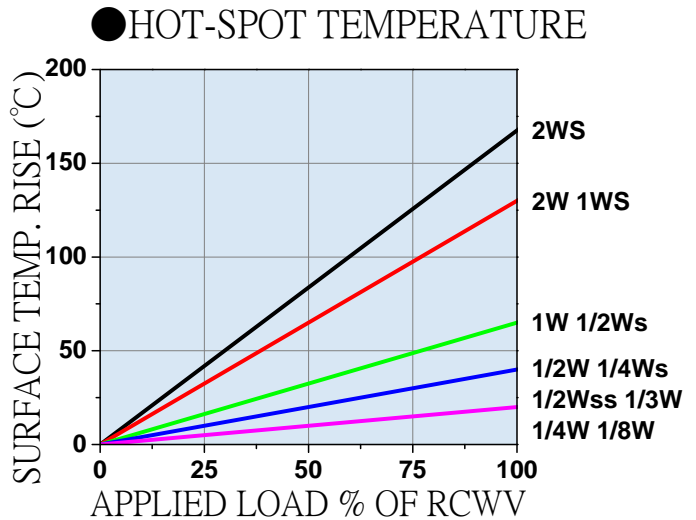
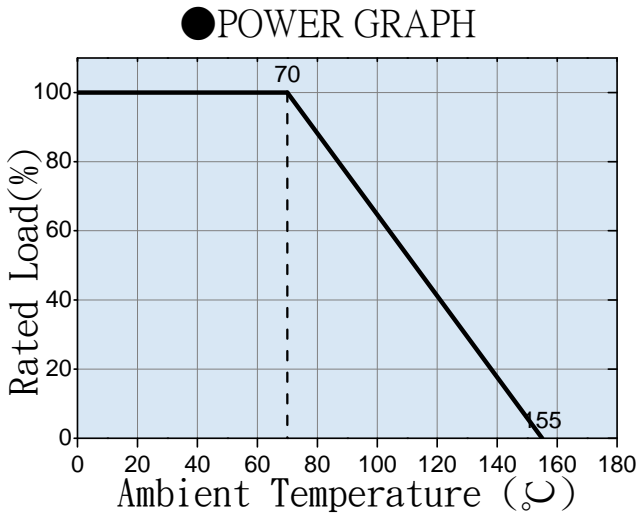


STYLE		DIMENSIONS(mm)				Comment
Normal	Miniature	L	D	H	d	
CF-1/8W	CF1/4Ws	3.3 <sup>+0.4</sup> <sub>-0.2</sub>	1.8±0.3	29±2.0	0.45±0.03	
CF-1/8W	CF1/4Ws	3.3 <sup>+0.7</sup> <sub>-0.2</sub>	1.8±0.3	29±2.0	0.45±0.03	
	CF1/2Wss	3.3 <sup>+0.7</sup> <sub>-0.2</sub>	1.8±0.3	29±2.0	0.45±0.03	
CF-1/4W	CF1/2Ws	6.3±0.5	2.3±0.3	28±2.0	0.55±0.03	
CF-1/3W	CF1/2Wss	8.5±0.5	2.7±0.5	27±2.0	0.60±0.03	
CF-1/2W	CF1Ws	9.0±0.5	3.2±0.5	26±2.0	0.65±0.03	
CF-1W	CF2Ws	11.5±1.0	4.5±0.5	35±2.0	0.78±0.03	
CF-2W	CF3Ws	15.5±1.0	5.0±0.5	32±2.0	0.78±0.03	

● **ELECTRICAL CHARACTERISTICS**

Power rating at 70°C	1/8W	1/4Ws	1/2WSS	1/4W	1/2Ws	1/3W	1/2WSS	1/2Ws	1/2W	1Ws	1W	2Ws	2W	3Ws
Body Size	3.3*1.8	3.3*1.8	3.3*1.8	6.3*2.3	6.3*2.3	8.5*2.7	8.5*2.7	6.3*2.3	9*3.2	9*3.2	11.5*4.5	11.5*4.5	15.5*5	15.5*5
Perating Temp. Range	-55°C to +155°C													
Max. Working Voltage	150V	200V	280V	250V	300V	280V	300V	320V	350V	400V	450V	500V	500V	500V
Max. Overload Voltage	300V	400V	500V	500V	500V	500V	500V	600V	700V	800V	1000V	1000V	1000V	1000V
Dielectric Withstanding voltage	300V	400V	400V	500V	500V	500V	500V	600V	700V	800V	1000V	1000V	1000V	1000V
Value Range、±5%	1Ω~22MΩ , E24 series													

Value Range for standard resistance , below or over this resistance on request.



● TEMPERATURE COEFFICIENT (T.C.R.)

STYLE		Max. Value of Temp. Coefficient ppm/°C		
		under 100KΩ	100KΩ to 1MΩ	1MΩ to 4M7Ω
CF	1W.2W.2WS. 3WS	±350 ppm	-0ppm -500ppm	-0ppm -1000ppm
	1/6W.1/4W.1/4WS 1/2W.1/2WS.1WS	+350ppm- 500ppm	-0ppm-700ppm	-0ppm-1500ppm

● ENVIRONMENTAL CHARACTERISTICS.

PERFORMANCE TEST	TEST METHOD	APPRAISE
SHORT TIME OVERLOAD	JIS-C-5202 5.5 2.5 times RCWV for 5 seconds	±(0.75%+0.05Ω)
TEMPERATURE COEFFICIENT(T.C.R.)	Resistance value at room Temperature and room Temperature+100°C	page
DIELECTRIC WITHSTANDING VOLTAGE	JIS-C5202 5.7 In V-Block for 60 seconds	By Type
PULSE OVERLOAD	JIS-C5202 5.8 4 times RCWV for 10000cycles(1sec.on , 25secs.off)	±(1%+0.05Ω)
INSULATION RESISTANCE	JIS-C5202 5.6 In V-Block	> 10000MΩ
LOAD LIFE	JIS-C5202 7.10 70°C at RCWV for 1000hrs.(1.5hrs. on , 0.5hrs.off)	±(3%+0.05Ω)
LOAD LIFE IN HUMIDITY	JIS-C5202 7.9 40±2°C 90~95%RH at RCWV for 1000hrs. (1.5hrs. on , 0.5hrs.off)	Less than 100KΩ ±3% 100KΩ or more ±5%
SOLDER ABILITY	JIS-C5202 6.5 260±5°C for 2±0.5 seconds	95% min. coverage
RESISTANCE TO SOLVENT	JIS-C5202 6.9 Trichroethane for 1 min. with ultrasonic	No deterioration of coatings and markings
TERMINAL STRENGTH	Direct load for 10 sec. In the direction off the terminal leads.	Tensile: ≥2.5kg

★ Rated continuous Working Voltage (RCWV) =  $\sqrt{POWER.RATING. \times RESISTANCE.VALUE}$

● Resistor body color

Standard : Epoxy Coating

1. Normal size-----Khaki
2. Small size-----Pink

Flame Proof : Silicone Coating

3. Normal size-----Grey
4. Small size-----Pink

● PART NUMBER:

CF		1/4W		3K		J		TB	
↓		↓		↓		↓		↓	
Type		Power rating		Resistance		J		Packaging	
CF	Carbon Film	1/8W	1/4WS	1R	1Ω	G	± 2%	TB	Taping Box
FCF	Flame Proof	1/4W	1/3W	10R	10Ω	J	± 5%	TR	Taping Reel
		1/2WS	1/2Wss	100R	100Ω			BU	Bulk
		1/2W	1WS	1K2	1K2Ω			F	F-TYPE
		1W	2WS	1M	1MΩ			M	M-TYPE
		2W	3WS	22M	22MΩ			PANA	PANA