

CF CARBON FILM FIXED RESISTOR

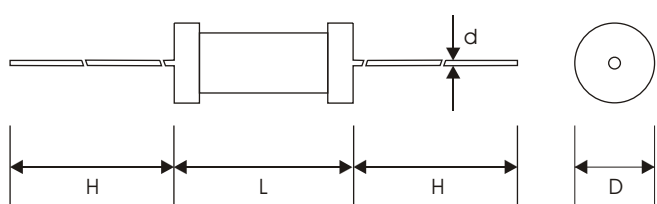
CF Series

INTRODUCTION :

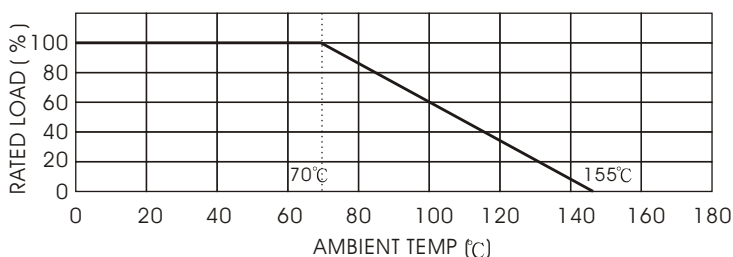
Developed for use in various kinds of transistor instrument, radio, TV and consumer products.

- ◆ High stability, accuracy and reliability.
- ◆ Low temperature coefficient and noise figure.
- ◆ Quality and reliability from automated production.
- ◆ Rigid control of raw materials.
- ◆ Light brown color on body.
- ◆ Meeting or exceeding the applicable requirements of EIA-RS-196-A, JIS-C-6402. and IEC-115.
- ◆ Wide application in audio systems, digital and analog computerized system, high frequency systems, precision bridge instruments.

OUTLINE DRAWING



DERATING CURVE



SPECIFICATIONS

TYPE RD	DIMENSION (mm)				POWER RATING	MAXIMUM WORKING VOLTAGE	MAXIMUM OVERLOAD VOLTAGE	RESISTANCE RANGE	
	L	D	H	D ± 0.02				± 2 % (G)	± 5 % (J)
CR-12	3.2 ± 0.2	1.8 ± 0.2	28 ± 1	0.48	1/8W, 1/6W	200	400	10 Ω ~ 470K	1 Ω ~ 4.7M
CR-25	6.5 ± 0.5	2.3 ± 0.3	28 ± 1	0.60	1/4W	250	500	1 Ω ~ 10M	0.5 Ω ~ 22M
CR-50	9.0 ± 0.5	3.2 ± 0.5	28 ± 1	0.60	1/2W	350	700	1 Ω ~ 10M	0.5 Ω ~ 22M
CR-100	12 ± 1.0	4.5 ± 0.5	35 ± 3	0.80	1W	500	1000	1 Ω ~ 10M	0.5 Ω ~ 22M
CR-200	16 ± 1.0	5.0 ± 0.5	35 ± 3	0.80	2W	500	1000	1 Ω ~ 10M	0.5 Ω ~ 22M

CHARACTERISTIC

REQUIREMENTS	PERFORMANCE				TEST METHOD		
					JIS-C-5202	MIR-R-226848	
Operating Temp. Range	-55°C ~ +155°C				—	—	
Temp. Coefficient (ppm/°C)	T.C.R. TYPE	± 350	-150~-160	-150~-1000	-150~-1300	5.2	4.6.11
	0.125 W Ω	under 1KΩ	1.1KΩ ~ 47KΩ	51KΩ ~ 510KΩ	560KΩ ~ 1MΩ		
	0.25 W	under 10KΩ	1.1KΩ ~ 150KΩ	160KΩ ~ 2.2MΩ	2.4MΩ ~ 5.1MΩ		
Noise (μ V/V)	0.5 W & OVER	under 22KΩ	24KΩ ~ 470KΩ	510KΩ ~ 2.2MΩ	2.4MΩ ~ 10MΩ	5.9 ~ 11	—
	NOISE TYPE	0.1	0.3	0.6	1.0		
	0.125 W & 0.16	—	under 10KΩ	11KΩ ~ 100KΩ	over 110 KΩ		
0.25 W & OVER	under 100KΩ	110KΩ ~ 510KΩ	560KΩ ~ 2.2MΩ	over 2.4 MΩ			
Dielectric Withstanding Voltage	No evidence of flashover or breakdown.				5.7 ~ A	4.6.7	
Resistance to solvents	Permanent Marking No physical or electrical damage or deterioration				—	MIL-STD-202F215	
Short Time Overload	Δ Rmax ≤ ± 1% + 0.05Ω				5.5 ~ A	4.6.5	
Resistance to Soldering Heat	Δ Rmax ≤ ± 1% + 0.05Ω				6.4 350°C 3sec.	4.6.9	
Temperature Cycling	Δ Rmax ≤ ± 0.5% + 0.05Ω				7.4 - 55°C 85	4.6.3	
Vibration	Δ Rmax ≤ ± 0.5% + 0.05Ω				6.3.3 ~ A	4.6.14	
Moisture Resistance	R > 100 K	Δ Rmax ≤ ± 5%			7.9, 40°C 90-90% RH, 1000 hrs.	4.6.10	
	R ≤ 100 K	Δ Rmax ≤ ± 3% + 0.05Ω					
Load Life	R > 100 K	Δ Rmax ≤ ± 3%			7.10, 70°C 1000 hrs.	4.6.12	
	R ≤ 100 K	Δ Rmax ≤ ± 2% + 0.05Ω					