

CARBON FILM RESISTORS

FLAME-PROOF TYPE
CR-25, CR-50, CR-100,
CR-200

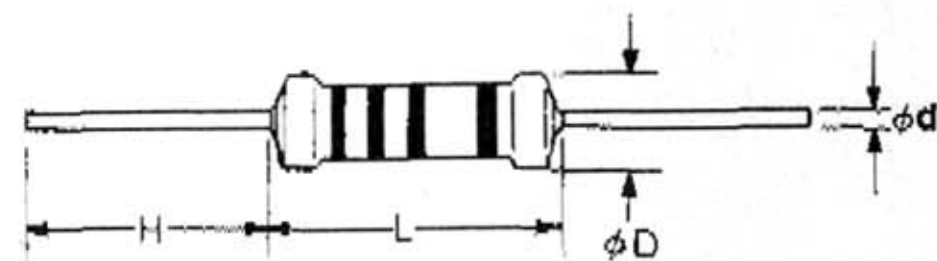
INTRODUCTION

The CR Series Flame-Proof Carbon Film Resistors are manufactured by Coating a homogeneous film of pure carbon on high grade ceramic rods, resistance less than 10Ω have an electroless-deposited nickel film, and are coated with layers of gray color flame-proof lacquer. These resistors meet overload tests in accordance with UL specification #1412 without producing a fire hazard.

FEATURES

- High power-to-size ratio for significant space savings
- Excellent long-term stability
- Complete flameproof construction
- Wide resistance range: 1Ω - $10M\Omega$
- Tolerance: $\pm 5\%$
- Coating and marking resist Trichlorethylene, Freon, and other cleaning agents.

DIMENSIONS (mm)



GENERAL SPECIFICATIONS

TYPE	DIMENSION (mm)				POWER RATING	MAXIMUM WORKING VOLTAGE	MAXIMUM OVERLOAD VOLTAGE	RESISTANCE RANGE	
	L	D	H	d				$\pm 2\%$ (G)	$\pm 5\%$ (J)
CR-25	6.3 ± 0.5	2.3 ± 0.3	28 ± 2	0.60 ± 0.05	1/4W	250	500	1Ω - 4.7M	1Ω - 10M
CR-50	9.0 ± 0.5	3.2 ± 0.5	28 ± 2	0.60 ± 0.05	1/2W	350	700	1Ω - 4.7M	1Ω - 10M
CR-100	11.5 ± 1.0	4.5 ± 0.5	35 ± 3	0.80 ± 0.05	1W	500	1000	1Ω - 4.7M	1Ω - 10M
CR-200	15.5 ± 1.0	5.0 ± 0.5	35 ± 3	0.80 ± 0.05	2W	500	1000	1Ω - 4.7M	1Ω - 10M

CHARACTERISTICS

Terminal Strength	no damage. △ Rmax ±0.5% or 0.5Ω
Soldering	good tining no damage, △ Rmax ±0.5% or 0.5Ω
Temperature Cycling	△ Rmax ±1%
Vibration	no damage. △ Rmax ±0.5% or 0.5Ω
Moisture Resistance	△ Rmax. 5%
Load Life	△ Rmax. 3%
Temperature Coefficient	See Fig. 4
Dielectric Strength	2x Work. Volt no breakdown △ Rmax. 0.5 %
Noise	See Fig. 5
Insulation Resistance	min 10 ¹⁰ Ω
Short-time Overload	△ Rmax. 1%
Resistance to Solvents	no damage.

FIG. 3 Derating Curve

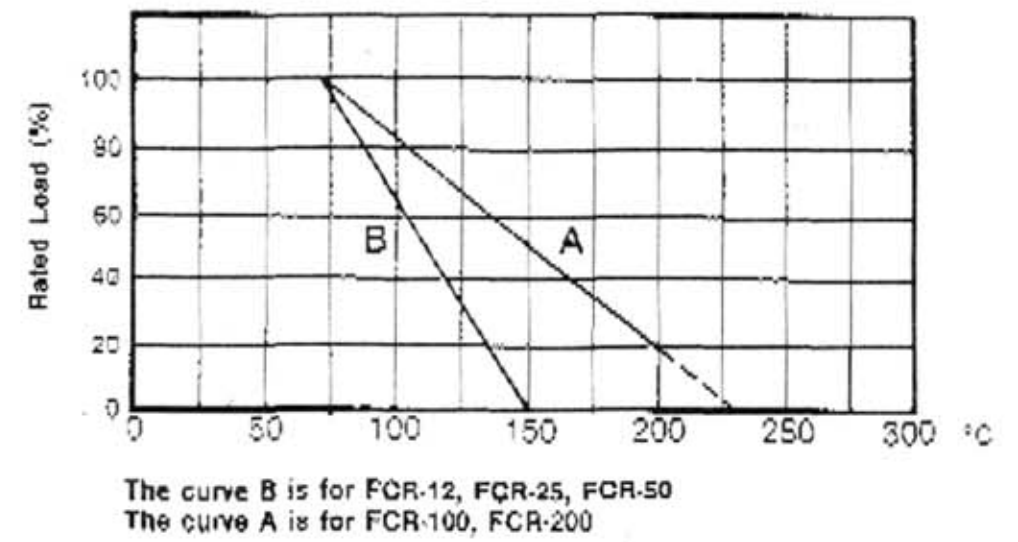


FIG. 4 Temperature Coefficient

Characteristics	Maximum value of temperature coefficient ppm/°C		
	Under 100 kΩ	100 k to 1 MΩ excl.	1MΩ and over
A	±350	+350 -500	+ 350 -1000
B	+350 -500	+350 -700	+ 350 -1000

FIG. 1 Moisture Resistance (Typical Curve for Reference)

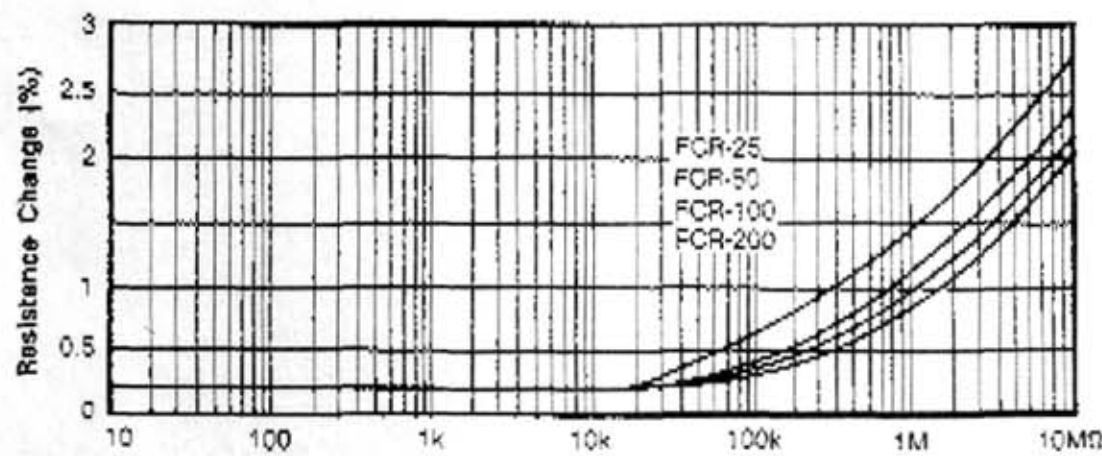


FIG. 5 Current Noise

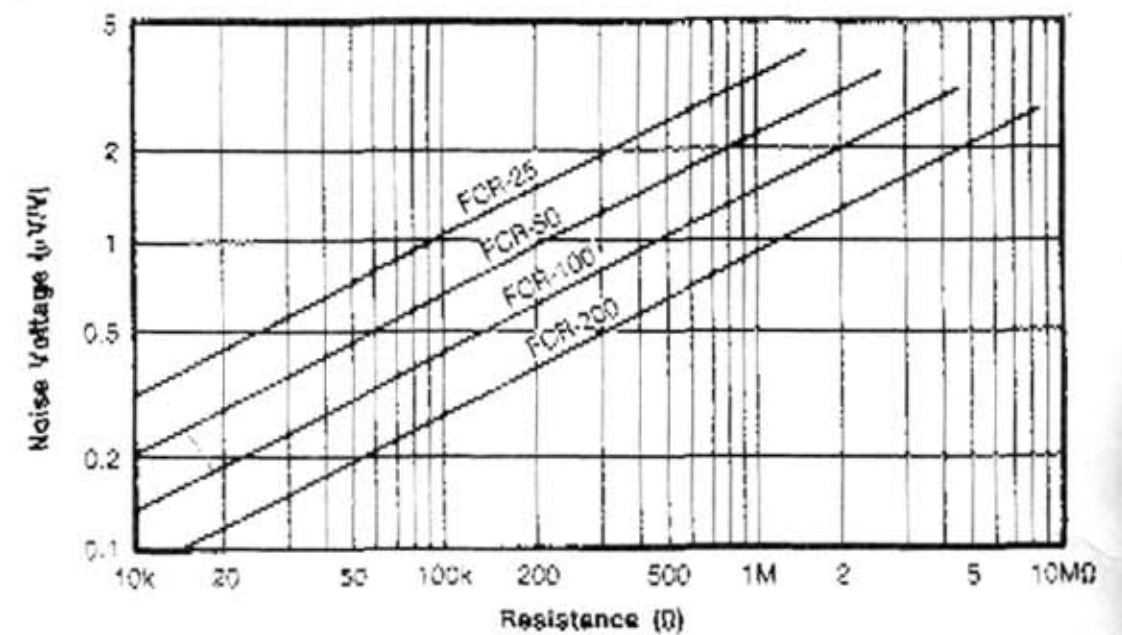


FIG. 2 Load Life (Typical Curve for Reference)

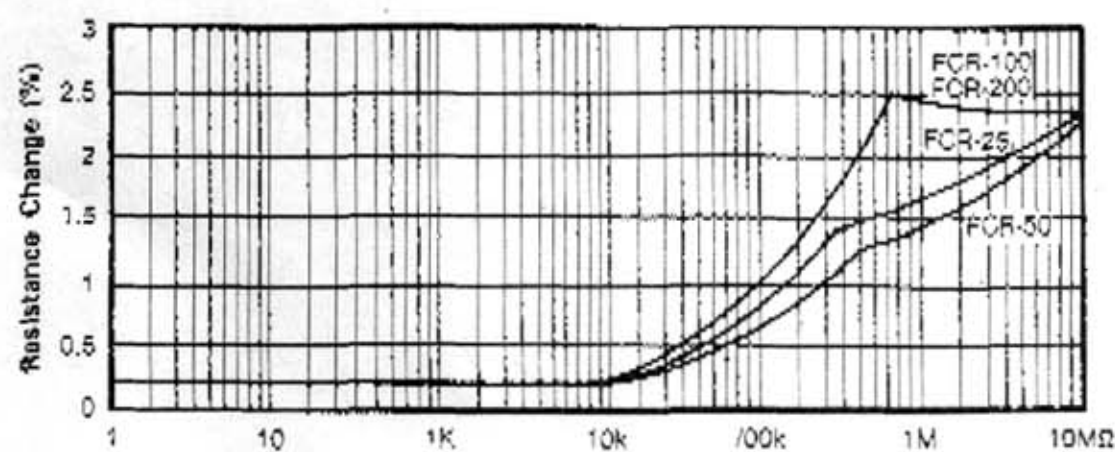


FIG. 6 High Frequency Characteristic

