

# PROFESSIONAL & FLAME-PROOF TYPE

## Miniature Style [ FC0 Series ]

### Carbon Film Resistors



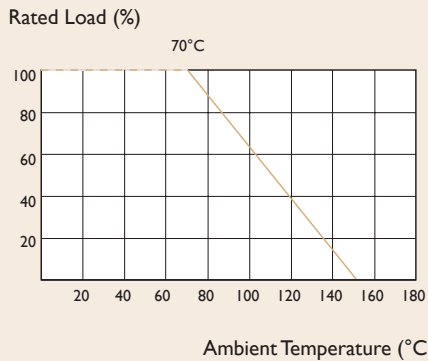
### INTRODUCTION

The FC0 series 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. The FC0207 are coated with layers of green color flame-proof lacquer. The FC0207 resistors meet overload test in accordance with UL specification #I412 without producing a fire hazard.

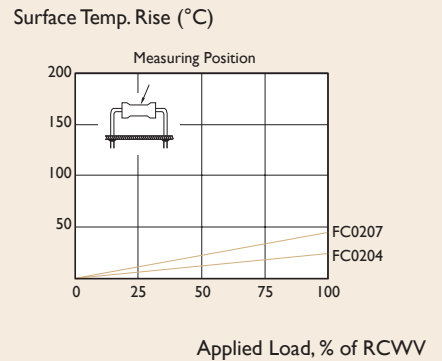
### FEATURES

- Excellent Long-Term Stability
- Miniature in Size
- Flameproof Silicone Coating (UL94V-0)
- Resistance Tolerance: ±5%
- Resistance Range: 1Ω~10MΩ

### DERATING CURVE



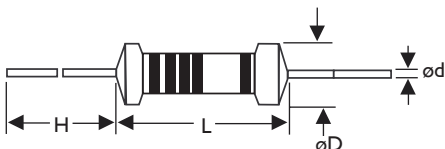
### HOT-SPOT TEMPERATURE



### TABLE I TEMPERATURE COEFFICIENT

STYLE	Max. Value of Temp. Coefficient ppm/°C		
	under 100KΩ	100KΩ ~ 1MΩ	1MΩ ~ 10MΩ
FC0204, FC0207	+350 -500	-700	-1500

### DIMENSIONS



STYLE	L	øD	H	ød
FC0204	3.4±0.3	1.9±0.2	28±2.0	0.5±0.05
FC0207	6.3±0.5	2.4±0.2	28±2.0	0.6±0.05

Unit : mm



Note :

## ELECTRICAL CHARACTERISTICS

STYLE	FC0204	FC0207
Power Rating at 70°C	0.4W	0.6W
Operating Temp. Range	-55°C to +155°C	
Maximum Working Voltage	200V	300V
Maximum Overload Voltage	400V	600V
Dielectric Withstanding Voltage	300V	500V
Value Range ±5%	1Ω~10MΩ	
Temperature Coefficient (by Type)	see TABLE I	

\* Standard resistance is 1Ω~10MΩ, below or over this resistance on request.

## 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)
Dielectric Withstanding Voltage	JIS-C-5202 5.7	in V-Block for 60 Seconds	by Type
Temperature Coefficient of Resistance	JIS-C-5202 5.2	-55°C to +155°C	by Type
Insulation Resistance	JIS-C-5202 5.6	in V-Block	>1000MΩ
Solderability	JIS-C-5202 6.5	235±5°C for 5±0.5 Seconds	95% Min. Coverage
Resistance to Solvent	JIS-C-5202 6.9	IPA for 1 Min. with Ultrasonic	No Deterioration of Coatings and Markings
Terminal Strength	Direct Load for 10 Sec. in The Direction of The Terminal Leads		≥2.5kg (24.5N)
Pulse Overload	JIS-C-5202 5.8	4 Times RCWV 10000 Cycles (1 Sec. on , 25 Sec. off)	±(1%+0.05Ω)
Load Life in Humidity	JIS-C-5202 7.9	40±2°C, 90~95% RH at RCWV for 1000 Hrs. (1.5 Hrs. on , 0.5 Hrs. off )	±(3%+0.05Ω)
Load Life	JIS-C-5202 7.10	70°C at RCWV for 1000 Hrs. (1.5 Hrs. on , 0.5 Hrs. off)	±(3%+0.05Ω)
Temperature Cycling	JIS-C-5202 7.4	-55°C→Room Temp.→+155°C→Room Temp. for 5 Cycles	±(1%+0.05Ω)
Resistance to Soldering Heat	JIS-C-5202 6.4	350°C±10°C for 3±0.5 Seconds	±(1%+0.05Ω)

\* Rated Continuous Working Voltage (RCWV)= $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$