

# Carbon Film Resistors - CR/FCR Series

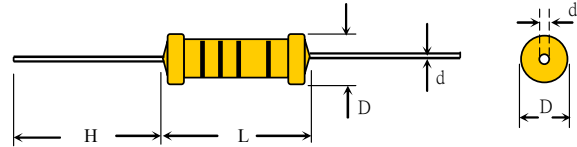
## FEATURES

- Industry's lowest cost
- Excellent long term stability
- Used in all kinds of application
- Standard Value: 10R-10Meg in E24 series
- Standard tolerance: +/-5% (available +/-2%)
- Body Color: yellow-brown (biege)
- Color band marking
- Flameproof coating available (As FCR-S type)
- Mini size available (As CR-S type)
- Operating Temperature : -55°C ~+125°C

## MATERIAL

- Element: Deposited Carbon Film
- Core: High Purity Ceramic Al<sub>2</sub>O<sub>3</sub>
- Termination: Standard solder-plated cooper lead
- Coating: Epoxy, (FCR is grey silicone)

## DIMENSION



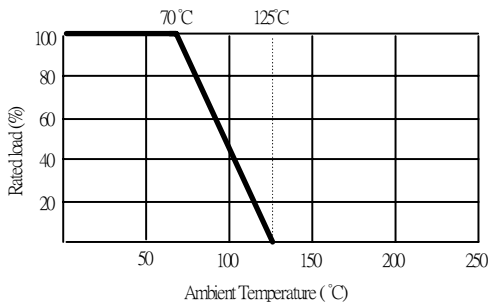
## GENERAL SPECIFICATION

TYPE	DIMENSION (mm)				POWER RATING	MAXIMUM WORKING VOLTAGE*	MAXIMUM OVERLOAD VOLTAGE**	RESISTANCE RANGE '+/-5%
	L	D	H	d +/- 0.05				
CR125	3.2+/-0.2	1.6+/-0.2	28 +/-1.0	0.45	1/8W	200V	400V	1Ω~10MΩ
CR025	6.0+/-0.5	2.3+/-0.3	28 +/-1.0	0.55	1/4W	250V	500V	0.47Ω~22MΩ
CR050	9.0+/-0.5	3.0+/-0.5	28 +/- 1.0	0.63	1/2W	350V	700V	0.47Ω~22MΩ
CR100	11+/-1.0	4.0+/-0.5	35 +/- 3.0	0.75	1W	500V	1000V	0.47Ω~22MΩ
CR200	15+/-1.0	5.0+/-0.5	35 +/- 3.0	0.75	2W	500V	1000V	0.47Ω~22MΩ
CR300	17+/-1.0	6.0+/-0.5	35 +/-3.0	0.75	3W	500V	1000V	0.5Ω~22MΩ

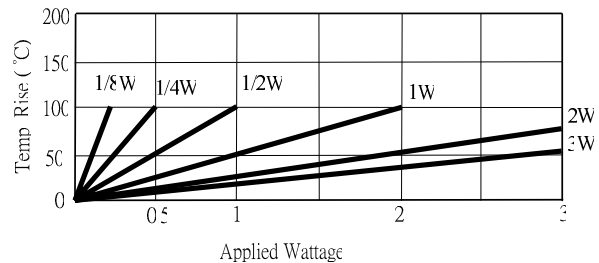
\* Maximum Working Voltage determined by  $E = \sqrt{P \times R}$ , where E should not exceed value listed in column above.

\*\* Maximum Overload Voltage equals to 2.5xE, but should not exceed value listed in column above

## DERATING CURVE



## TEMPERATURE RISE



## CHARACTERISTIC

Temperature Coefficient	+/- 300ppm (<100kΩ), +/- 800ppm max
Insulation Resistance	10,000MΩ Min.
Load Life (1000 hours)	<+/- 3% typical, +/- 5% Max
Shorttime Overload	+/- 1.0% Max.
Temperature Cycling	+/- 1.0% Max.
Moisture Resistance	+/- 5.0% Max.
Shock & Vibration	+/- 0.5% Max. or 0.5Ω
Effect of Soldering	+/- 0.5% Max. or 0.5Ω

\* Total maximum resistance change is  $\Delta R + 0.01R$

## HOW TO ORDER :

CR125	J	TB	=	10R
↓	↓	↓		↓
Type/Power Tol.		Package		Resistance
CR125	J=+/- 5%	B=Bulk		10R = 10Ω
CR025		TB=Tape/box		1K2 = 1.2KΩ
CR050		TR=Tape/reel		1M = 1MΩ
CR100		Lead forming		
CR200		M		
CR300		F		
		MB		

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