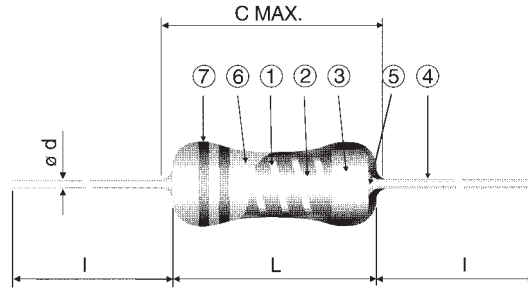
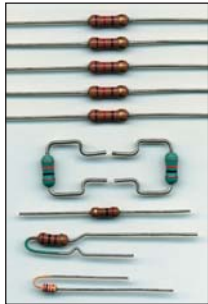


CARBON FILM STANDARD

CF • CFP
(RD • RDF)



STRUCTURE

- 1 Ceramic core
- 2 Trimmed carbon film
- 3 Steel cap (Cu, Sn plated)
- 4 Lead wire
- 5 Welding joint
- 6 Epoxy resin overcoating
- 7 Marking

IDENTIFICATION

PRODUCT CODE	COATING COLOR	MARKING
CFS 1/4	Ivory	Color Code (R-value and tolerance)
CF 1/4, CFB 1/2	Venetian Red	
CFS 1/2	Green	
CFP series		

Products with Pb-free terminations meet RoHS requirements

TYPE DESIGNATION (HOW TO ORDER)

Old Part No.	RD	25S	J	T52	A	10K		
New Part No. (Pb-free)	CF	1/4	C	T52	A	103	J	
	PRODUCT CODE	POWER RATING	TERMINATION SURFACE MATERIAL	RESISTANCE TOLERANCE	TAPING & FORMING	PACKAGING	NOMINAL RESISTANCE	RESISTANCE TOLERANCE
		S1/4(16S):0.25W 1/4(25S):0.25W B1/2(50S):0.5W S1/2(50SS):0.5W	C: SnCu L: Sn/Pb			A: Ammo R: Reel <small>*Please see "PACKAGING"</small>	3 digits	G: ±2% J: ±5%

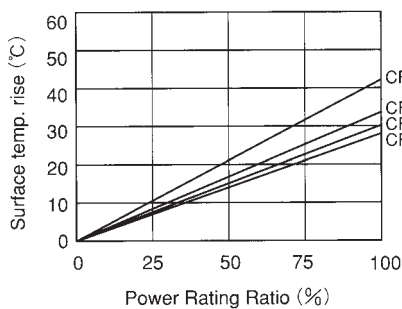
FEATURES

- General purpose lead-type resistor
- Automatic insertion is applicable
- Various types of forming are available
- Stronger in pulse resistance than chip resistors of the same power
- CFP = Flame retardant coating (UL94 V-0)
- CF (P) S = Reduced size
- Rated ambient temperature: +70°C
- Operating temperature range: -55°C ... +155°C

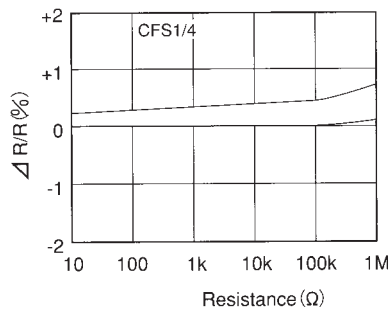
DIMENSIONS (mm)

TYPE	L	C Max.	D	d (nom.)	I
CF (P) S 1/4	3.2 ± 0.2	3.4	1.7 ^{+0.2} / _{-0.1}	0.45	20 Min.
CF 1/4	6.1 ± 0.5	7.1	2.3 ± 0.3	0.6	
CFP 1/4	6.3 ± 0.5				
CF (P) B 1/2	9.0 ± 1.0	11.0	3.5 ± 0.5	0.7	
CF (P) S 1/2	6.3 ± 0.5				

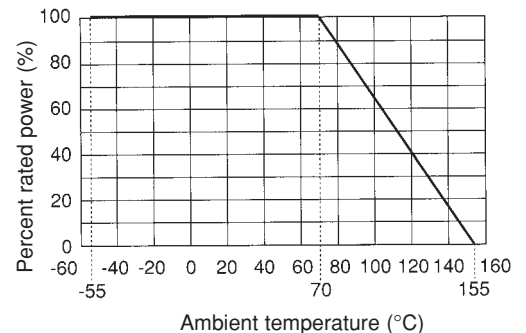
SURFACE TEMPERATURE RISE



LOAD LIFE AT +70°C/1000h



DERATING CURVE



RATING

DIN SIZE	TYPE	POWER RATING*	T.C.R. (ppm/K)				MAX. WORKING VOLTAGE	MAX. OVERLOAD VOLTAGE	DIELECTRIC WITH-STANDING VOLTAGE	RESISTANCE RANGE	
			+350... -450	0... -700	0... -1000	0... -1300				E24	
										G (±2%)	J (±5%)
0204	CFS 1/4	0.25 W	2.2Ω...47kΩ	51kΩ...100kΩ	110kΩ...330kΩ	360kΩ...1MΩ	250 V	500 V	300 V	10Ω...330kΩ	2.2Ω...1MΩ
0207	CF 1/4	0.25 W	2.2Ω...100kΩ	110kΩ...330kΩ	360kΩ...1MΩ	1.1MΩ...5.1MΩ	300 V	600 V	500 V		
0411	CFB 1/2	0.5 W	2.2Ω...100kΩ	110kΩ...1MΩ	1.1MΩ...2.2MΩ	2.4MΩ...5.1MΩ	400 V	800 V	700 V	10Ω...1MΩ	2.2Ω...5.1MΩ
0307	CFS 1/2	0.5 W	2.2Ω...91kΩ	100kΩ...1MΩ	1.1MΩ...2.2MΩ	2.4MΩ...5.1MΩ	350 V	700 V			
0204	CFPS 1/4	0.25 W	2.2Ω...47kΩ	51kΩ...100kΩ	110kΩ...330kΩ	360kΩ...1MΩ	250 V	500 V	300 V	10Ω...100kΩ	
0207	CFP 1/4	0.25 W	2.2Ω...100kΩ	110kΩ...330kΩ	360kΩ...1MΩ	-	300 V	600 V	500 V		2.2Ω...1MΩ
0411	CFPB 1/2	0.5 W	2.2Ω...100kΩ	110kΩ...1MΩ	-	-	400 V	800 V	700 V	10Ω...1MΩ	
0307	CFPS 1/2	0.5 W	2.2Ω - 91kΩ	100kΩ...1MΩ	-	-	350 V	700 V			

*For resistors operated in ambient temperature over +70°C, power rating shall be derated.