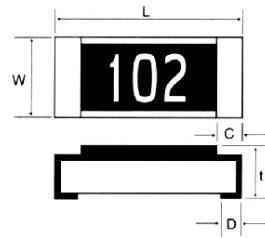


# Flat Chip Resistors

## CR Flat Chip Resistor

### Features

- Excellent mechanical strength and electrical stability due to special electrode construction.
- Free from troubles at placement due to accurate and uniformed physical dimensions.



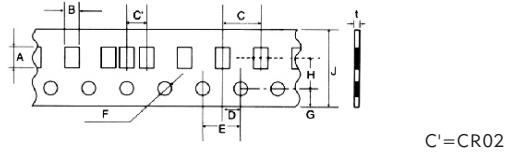
### Characteristics

Requirements	Characteristics	Resistance Range	
		JIS C 5202	EIAJ RC 2690
Temp. Coefficient (ppm/ $^{\circ}$ C)	$\pm 100, \pm 200$	5.2	—
Terminal Strength	$\pm (1\% + 0.1 \Omega)$ Over 1kg/mm <sup>2</sup>	—	6.5
Resistance to Soldering Heat	$\pm (1\% + 0.05 \Omega)$	6.4 270 $^{\circ}$ C / 10sec	—
Short Time Overload	$\pm (2\% + 0.05 \Omega)$	5.5A	—
Intermittent Overload	$\pm (2\% + 0.1 \Omega)$	5.8	—
Temperature Cycling	$\pm (1\% + 0.2 \Omega)$	—	6.8
Load Life	$\pm (3\% + 0.1 \Omega)$	7.10 1000hr	—
Moisture Resistance	$\pm (3\% + 0.1 \Omega)$	7.9 1000hr	—
Electrode Solderability	95%	6.5 230 $^{\circ}$ C / 5sec	—

### Rating

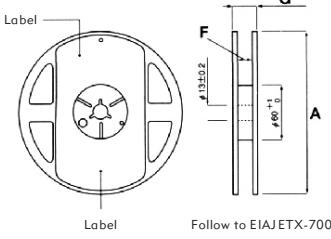
Type	Inch	mm	Rated Power	Max Working Voltage	Max Overload Voltage	Resistance Range	Dimension					Operating Temp. Range	Pack a Reel	
							L	W	C	D	t			
CR02	0402	1005	1/16W	50V	100V	J, F 10 $\Omega$ ~1M $\Omega$	1.0 $\pm$ 0.05	0.5 $\pm$ 0.05	0.2 $\pm$ 0.1	0.25 $^{+0.05}_{-0.1}$	0.35 $\pm$ 0.05	10000	10000	
CR03	0603	1608	1/10W	50V	100V		1.6 $\pm$ 0.1	0.85 $\pm$ 0.1	0.3 $\pm$ 0.2	0.2 $^{+0.2}_{-0.1}$	0.4 $\pm$ 0.05	5000	5000	
CR05	0805	2012	1/10W, 1/6W	150V	300V	J 1 $\Omega$ ~10M $\Omega$ F 10 $\Omega$ ~1M $\Omega$	2.05 $\pm$ 0.1	1.3 $\pm$ 0.1	0.4 $\pm$ 0.2	0.3 $^{+0.2}_{-0.1}$	0.45 $^{+0.1}_{-0.05}$	-55 $^{\circ}$ C 125 $^{\circ}$ C	5000	5000
			1/8W	100V	200V		3.1 $\pm$ 0.1	1.6 $\pm$ 0.1	0.45 $\pm$ 0.25	0.4 $^{+0.2}_{-0.1}$	0.55 $^{+0.1}_{-0.05}$		5000	
			1/4W, 1/2W	200V	400V		3.2 $\pm$ 0.2	2.6 $\pm$ 0.2	0.5 $\pm$ 0.2	0.5 $\pm$ 0.3	0.6 $\pm$ 0.1		4000	
			1/2W	200V	400V		5.0 $\pm$ 0.2	2.5 $\pm$ 0.2	0.6 $\pm$ 0.2	0.6 $\pm$ 0.2	0.6 $\pm$ 0.1		4000	
CR10	1210	3225	1/4W, 1/2W	200V	400V		6.4 $\pm$ 0.2	3.2 $\pm$ 0.2	0.7 $\pm$ 0.2	0.7 $\pm$ 0.2	0.6 $\pm$ 0.1	4000	4000	
CR20	2010	5025	1/2W	200V	400V								4000	
CR12	2512	6332	1W	200V	400V								4000	

### Taping Dimensions



Type	A	B	C	D	E	F	G	H	J	t
CR02	1.15 $\pm$ 0.1	0.65 $\pm$ 0.1	2.0 $\pm$ 0.05	1.0 $\pm$ 0.05	2.0 $\pm$ 0.05	1.5 $^{+0.1}_{-0}$	1.75 $\pm$ 0.1	3.5 $\pm$ 0.05	8.0 $\pm$ 0.2	0.55 $\pm$ 0.1
CR03	1.9 $\pm$ 0.1	1.1 $\pm$ 0.1	4.0 $\pm$ 0.1	2.0 $\pm$ 0.05	4.0 $\pm$ 0.05	1.5 $^{+0.1}_{-0}$	1.75 $\pm$ 0.1	3.5 $\pm$ 0.05	8.0 $\pm$ 0.2	0.7 $\pm$ 0.1
CR05	2.4 $\pm$ 0.1	1.65 $\pm$ 0.1	4.0 $\pm$ 0.1	2.0 $\pm$ 0.05	4.0 $\pm$ 0.05	1.5 $^{+0.1}_{-0}$	1.75 $\pm$ 0.1	3.5 $\pm$ 0.05	8.0 $\pm$ 0.2	0.9 $\pm$ 0.1
CR06	3.5 $\pm$ 0.1	1.9 $\pm$ 0.1	4.0 $\pm$ 0.1	2.0 $\pm$ 0.05	4.0 $\pm$ 0.05	1.5 $^{+0.1}_{-0}$	1.75 $\pm$ 0.1	3.5 $\pm$ 0.05	8.0 $\pm$ 0.2	0.9 $\pm$ 0.1
CR10	3.5 $\pm$ 0.1	2.8 $\pm$ 0.1	4.0 $\pm$ 0.1	2.0 $\pm$ 0.05	4.0 $\pm$ 0.05	1.5 $^{+0.1}_{-0}$	1.75 $\pm$ 0.1	3.5 $\pm$ 0.05	8.0 $\pm$ 0.2	0.9 $\pm$ 0.1
CR20	5.3 $\pm$ 0.1	2.9 $\pm$ 0.1	4.0 $\pm$ 0.1	2.0 $\pm$ 0.05	4.0 $\pm$ 0.05	1.5 $^{+0.1}_{-0}$	1.75 $\pm$ 0.1	5.5 $\pm$ 0.05	12.5 $\pm$ 0.2	1.0 $\pm$ 0.1
CR12	6.6 $\pm$ 0.1	3.4 $\pm$ 0.1	4.0 $\pm$ 0.1	2.0 $\pm$ 0.05	4.0 $\pm$ 0.05	1.5 $^{+0.1}_{-0}$	1.75 $\pm$ 0.1	5.5 $\pm$ 0.05	12.5 $\pm$ 0.2	1.0 $\pm$ 0.1

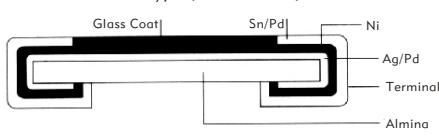
### Reel Dimensions



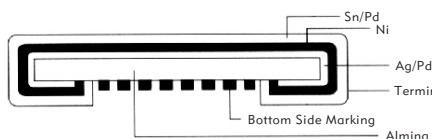
Type	CR02,03,05,06,10	CR20,CR12
A	$\phi 180^{+0}_{-3}$	$\phi 180^{+0}_{-3}$
F	9.0 $\pm$ 0.3	13.0 $\pm$ 0.3
G	11.4 $\pm$ 1.0	15.4 $\pm$ 1

### Structure · Material

#### 1. Conventional Type (Section Cut)



#### 2. Low Impedance Jumper (Section Cut)



A. Conductive part (Ag/Pd+Ni+Sn/Pd) is lower in impedance than Ag/Pd relay.  
B. Flow soldering is made like below sketch resulting lowering in impedance.