

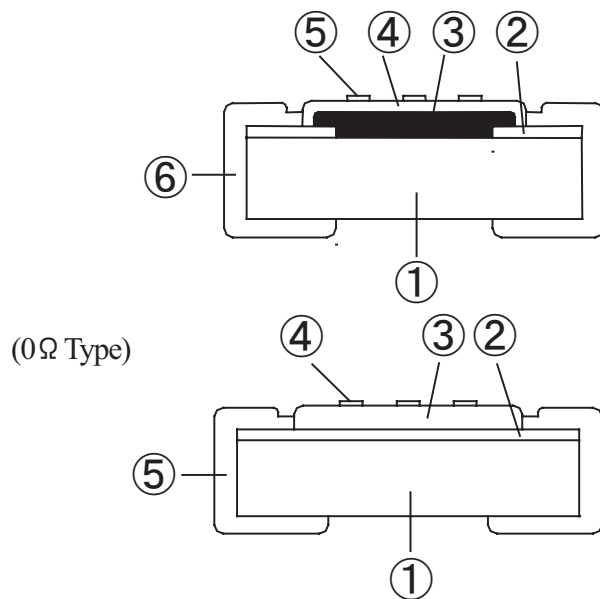


Flat Chip Resistors

*1 Article	CR06 (CR1/20)	CR10 (CR1/16S)	CR16 (CR1/16)	CR20 (CR1/10)	CR32 (CR1/8)	CR35 (CR1/4)	CR50 (CR1/2)	CR64 (CR1)
Size Code inch	0201	0402	0603	0805	1206	1210	2010	2512
Size Code mm	0603	1005	1608	2012	3216	3225	5025	6432

*1 (): Conventional Type No.

Construction



Symbol	Material List
①	Alumina substrate
②	Conductor
③	Resistive film
④	Over coat
⑤	Marking *2
⑥	Side termination

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*2 No marking on CR06, CR10, CR16 (E-96 Series)

Type Designation

*1			
CR16 (CR1/16)	102	J	V
Article *1	Resistance	Tolerance (%)	Packaging
CR06(CR1/20)	3 or 4 digit (Resistance) (Marking)	Symbol Tolerance	Symbol Packaging
CR10(CR1/16S)	0Ω → 000	D ± 0.5	B Bulk
CR16(CR1/16)	4.7Ω → 4R7	F ± 1.0	V Paper taping
CR20(CR1/10)	1kΩ → 102	G ± 2.0	E Embossed taping
CR32(CR1/8)	1.02kΩ → 1021	J ± 5.0	C Bulk case
CR35(CR1/4)		K ± 10.0	
CR50(CR1/2)			
CR64(CR1)			

0Ω type is no marking



■ Rating

*1 Article	Rated Wattage (%)	Tolerance		Resistance Range	T.C.R.	Max. Working Voltage (%)	Max. Overload Voltage (%)	0Ω Type	
		(%)		E-24, E-96 Series Standard (%)	(Ω)			Rated Current (A)	Resistance (Ω)
CR06 (CR1/20)	0.050	F	±1	10 ~ 1M	±250	25	50	Max. 50mΩ	0.5
		G	±2	10 ~ 1M	±250				
		J	±5	10 ~ 1M	±250				
CR10 (CR1/16S)	0.063	D	±0.5	100 ~ 100k	±50	50	100		1.0
		F	±1	10 ~ 1M	±100				
		G	±2	10 ~ 1M	±200				
CR16 (CR1/16)	0.100	J	±5	4.7 ~ 2.2M	±300	50	100		1.0
		D	±0.5	100 ~ 100k	±50				
		D	±0.5	100 ~ 976	±100				
		F	±1	10 ~ 1M	±100				
		G	±2	10 ~ 1M	±200				
		J	±5	1 ~ 4.3 4.7 ~ 3.3M 3.6M ~ 10M	-100 ~ +600 ±200 ±300				
CR20 (CR1/10)	0.125	D	±0.5	100 ~ 100k	±100	150	200		1.5
		F	±1	10 ~ 1M	±100				
		G	±2	10 ~ 1M	±200				
		J	±5	1 ~ 4.3 4.7 ~ 3.3M 3.6M ~ 10M	-100 ~ +600 ±200 ±300				
		K	±10	11M ~ 22M	±300				
		D	±0.5	100 ~ 100k	±100				
CR32 (CR1/8)	0.250	F	±1	10 ~ 1M	±100	200	400		2.0
		G	±2	10 ~ 1M	±200				
		J	±5	1 ~ 4.3 4.7 ~ 3.3M 3.6M ~ 10M	-100 ~ +600 ±200 ±300				
		K	±10	11M ~ 22M	±300				
		D	±0.5	100 ~ 100k	±100				
		F	±1	10 ~ 1M	±100				
CR35 (CR1/4)	0.250	G	±2	10 ~ 1M	±200	200	400		2.0
		J	±5	1 ~ 4.3 4.7 ~ 3.3M 3.6M ~ 10M	-100 ~ +600 ±200 ±300				
		G	±2	10 ~ 1M	±200				
CR50 (CR1/2)	0.500	J	±5	1 ~ 1M	±500	200	400		2.0
CR64 (CR1)	1.000	J	±5	1 ~ 9.1 10 ~ 1M	±500 ±300	200	400		2.0

*1 ():Conventional Type No.

★Operating temperature range : -55 °C ~ +125 °C

★E-96 series resistance values are available for D class F class.

★Please apply the rated voltage or lower.

Rated voltage is calculated by $E = \sqrt{PR}$

E = Rated Voltage (V)

P = Rated Power (W)

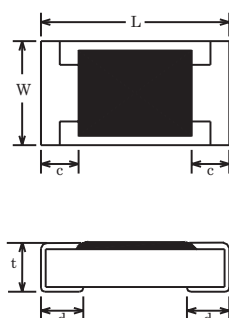
R = Resistance (Ω)

★In case rated voltage calculation is excess of maximum working voltage, maximum or lower voltage be applied.



Flat Chip Resistors

Dimension

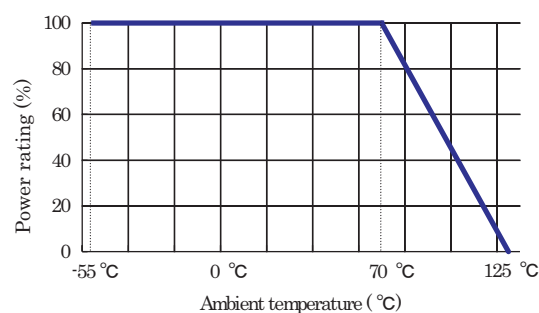


Article *1	L	W	c	d	t
CR06 (CR1/20)	0.60 ± 0.03	0.30 ± 0.03	0.12 ± 0.05	0.15 ± 0.05	0.23 ± 0.03
CR10 (CR1/16S) LCR10 (LCR1/16S)	1.00 ± 0.05	0.50 ± 0.05	0.20 ± 0.10	0.25 ± 0.10	0.35 ± 0.05
CR16 (CR1/16), LCR16 (LCR1/16) FCR16 (FCR1/16)	1.60 ± 0.15	0.80 ^{+0.20} _{-0.10}	0.25 ± 0.20	0.25 ± 0.20	0.50 ^{+0.15} _{-0.05}
CR20 (CR1/10), LCR20 (LCR1/10) UCR20 (UCR1/10), FCR20 (FCR1/10)	2.00 ^{+0.20} _{-0.10}	1.25 ^{+0.20} _{-0.10}	0.40 ± 0.20	0.40 ± 0.20	0.50 ^{+0.15} _{-0.05}
CR32 (CR1/8), LCR32 (LCR1/8) ECR32, FCR32 (FCR1/8)	3.20 ^{+0.10} _{-0.15}	1.60 ^{+0.10} _{-0.15}	0.50 ± 0.20	0.50 ± 0.20	0.55 ^{+0.15} _{-0.05}
CR35 (CR1/4), LCR35 (LCR1/4) FCR35 (FCR1/4)	3.20 ^{+0.10} _{-0.15}	2.60 ^{+0.10} _{-0.15}	0.50 ± 0.20	0.50 ± 0.20	0.55 ^{+0.15} _{-0.05}
CR50 (CR1/2), LCR50 (LCR1/2) ECR50, FCR50 (FCR1/2)	5.00 ± 0.20	2.50 ± 0.20	0.60 ± 0.25	0.60 ± 0.25	0.56 ± 0.15
CR64 (CR1) LCR64 (LCR1)	6.30 ± 0.20	3.20 ± 0.20	0.60 ± 0.25	0.60 ± 0.25	0.56 ± 0.15

*1 (): Conventional Type No.

Power rating

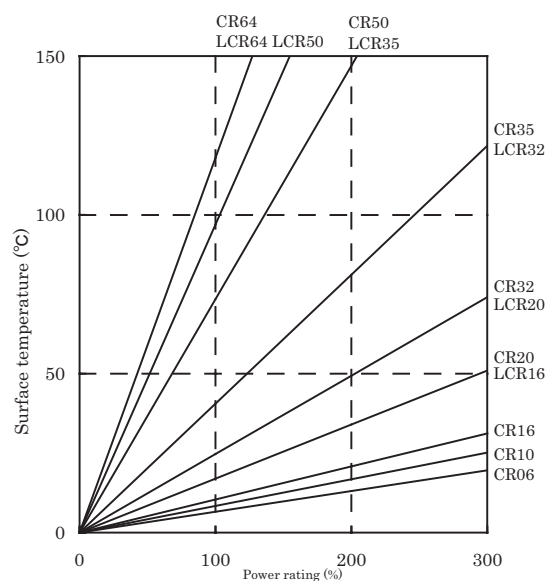
For resistors operated in ambient temperature above 70 °C,
power rating must be derated in accordance with the derating curve.



Surface temperature

Surface temperature rise is shown in this figure.

Please notice that CR50 and CR64 have high temperature rise when
Loaded 100%.



Packaging

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