

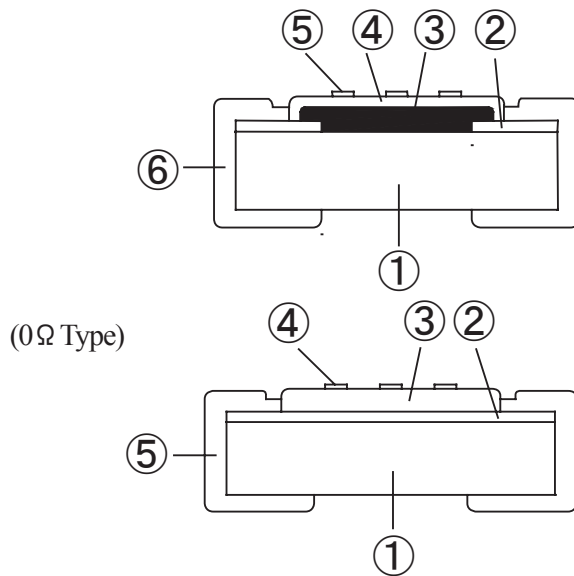


# Flat Chip Resistors

*1 Model No.	CR04 (CR1/32)	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	01005	0201	0402	0603	0805	1206	1210	2010	2512
Size Code mm	0402	0603	1005	1608	2012	3216	3225	5025	6432

\*1 ( ): Conventional Model 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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①	Alumina substrate
②	Conductor
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④	Marking *2
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\*2 No marking on CR04, CR06, CR10, CR16 (E-96 Series)

## Model Designation

Conventional Model No.

CR1/16	102	J	V
①	②	③	④

Model No.

CR16	—	102	J	V
①		②	③	④

Model No. for user who requires it.

CR16	—	102	J	V	G
①		②	③	④	⑤

① Model No.	② Resistance	③ Tolerance (%)	④ Packaging	⑤ TCR
CR04(CR1/32)	3 or 4 digit	Symbol Tolerance	Symbol Packaging	Symbol TCR(ppm/°C)
CR06(CR1/20)	(Resistance) (Marking)	D ± 0.5	B Bulk	H ± 100
CR10(CR1/16S)	0Ω → 000	F ± 1.0	V Paper taping	K ± 250
CR16(CR1/16)	4.7Ω → 4R7	G ± 2.0	E Embossed taping	M ± 500
CR20(CR1/10)	1kΩ → 102	J ± 5.0		
CR32(CR1/8)	1.02kΩ → 1021	K ± 10.0		
CR35(CR1/4)				
CR50(CR1/2)				
CR64(CR1)				

0Ω type is no marking



# Flat Chip Resistors

## Rating

*1 Model No.	Rated Wattage (W)	Tolerance (%)		Resistance (Ω)	T.C.R. (ppm /°C)	Max. Working Voltage (V)	Max. Overload Voltage (V)	0Ω Type				
								Rated Curent (A)	Resistance (Ω)			
CR04	0.03	F	±1	10~1M	±250	15	30	03	Max. 50m Ω			
		G	±2	10~1M	±250							
		J	±5	10~1M	±250							
CR06 (CR1/20)	0.05	F	±1	10~1M	±200	25	50	05				
		G	±2	10~1M	±200							
		J	±5	1.0~9.1	±400							
CR10 (CR1/16S)	0.10	J	±5	10~1M	±200	50	100	10				
		D	±0.5	10~97.6	±100							
		D	±0.5	100~1M	±50							
		F	±1	10~1M	±100							
		G	±2	10~1M	±200							
CR16 (CR1/16)	0.125	J	±5	1.0~9.1	±300	50	100	10				
		J	±5	10~10M	±200							
		D	±0.5	100~976	±100							
		D	±0.5	1K~100K	±50							
		F	±1	10~1M	±100							
		G	±2	10~1M	±200							
		J	±5	1~4.3	-100~+600							
CR20 (CR1/10)	0.25	J	±5	4.7~3.3M	±200	150	200	15				
		J	±5	3.6M~10M	±300							
		D	±0.5	100~1K	±100							
		F	±1	10~1K	±100							
	*2 0.25	G	±2	10~1K	±200					200	400	20
		J	±5	1~4.3	-100~+600							
		J	±5	4.7~1K	±200							
		D	±0.5	1.02K~100K	±100							
		F	±1	1.02K~1M	±100							
		G	±2	1.1K~1M	±200							
CR32 (CR1/8)	0.25	J	±5	1.1K~3.3M	±200	200	400	20				
		J	±5	3.6M~10M	±300							
		K	±10	11M~22M	±300							
		D	±0.5	100~100K	±100							
		F	±1	10~1M	±100							
		G	±2	10~1M	±200							
CR35 (CR1/4)	0.50	J	±5	1~4.3	-100~+600	200	400	20				
		J	±5	4.7~3.3M	±200							
		J	±5	3.6M~10M	±300							
		K	±10	11M~22M	±300							
		D	±0.5	100~100K	±100							
		F	±1	10~1M	±100							
CR50 (CR1/2)	0.75	G	±2	10~1M	±300	200	400	20				
		J	±5	1.0~9.1	±500							
		J	±5	10~1M	±300							
		J	±5	1.0~9.1	±500							
CR64 (CR1)	1.00	J	±5	10~1M	±300	200	400	20				
		J	±5	10~1M	±300							

\*1 ( ):Conventional Model No.

\*2 Short-time overload test condition : Voltage equal to 2.5times rated voltage⇒ Voltage equal to 1.5 times rated voltage

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

★Please apply the rated voltage or lower.

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

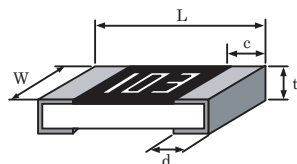
E = Rated Voltage (V)  
P = Rated Power (W)  
R = Resistance (Ω)

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



# Flat Chip Resistors

## Dimension



Model No. <sup>*1</sup>	L	W	c	d	t
CR04 (CR1/32)	0.40 ± 0.02	0.20 ± 0.02	0.10 ± 0.03	0.10 ± 0.03	0.13 ± 0.02
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)	1.00 ± 0.05	0.50 ± 0.05	0.20 ± 0.10	0.25 ± 0.10	0.35 ± 0.05
CR16 (CR1/16)	1.60 ± 0.15	0.80 <sup>+0.20</sup> <sub>-0.10</sub>	0.25 ± 0.20	0.25 ± 0.20	0.45 ± 0.10
CR20 (CR1/10)	2.00 <sup>+0.20</sup> <sub>-0.10</sub>	1.25 <sup>+0.20</sup> <sub>-0.10</sub>	0.40 ± 0.20	0.40 ± 0.20	0.50 ± 0.10
CR32 (CR1/8)	3.20 <sup>+0.10</sup> <sub>-0.15</sub>	1.60 <sup>+0.10</sup> <sub>-0.15</sub>	0.50 ± 0.20	0.50 ± 0.20	0.55 <sup>+0.15</sup> <sub>-0.05</sub>
CR35 (CR1/4)	3.20 <sup>+0.10</sup> <sub>-0.15</sub>	2.60 <sup>+0.10</sup> <sub>-0.15</sub>	0.50 ± 0.20	0.50 ± 0.20	0.55 <sup>+0.15</sup> <sub>-0.05</sub>
CR50 (CR1/2)	5.00 ± 0.15	2.50 ± 0.20	0.60 ± 0.25	0.60 ± 0.25	0.56 ± 0.15
CR64 (CR1)	6.30 ± 0.15	3.20 ± 0.20	0.60 ± 0.25	0.60 ± 0.25	0.56 ± 0.15

\*1 ( ): Conventional Model No.

## Power rating

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

Operating temperature range

CR10~CR64: -55°C+155°C

CR04, CR06: -55°C+125°C

## Packaging

Refer "Dimension, Packaging, etc."

