

NEW

FIXED THICK FILM CHIP RESISTORS; RECTANGULAR TYPE & LOW OHM

KAMAYA OHM

RCC

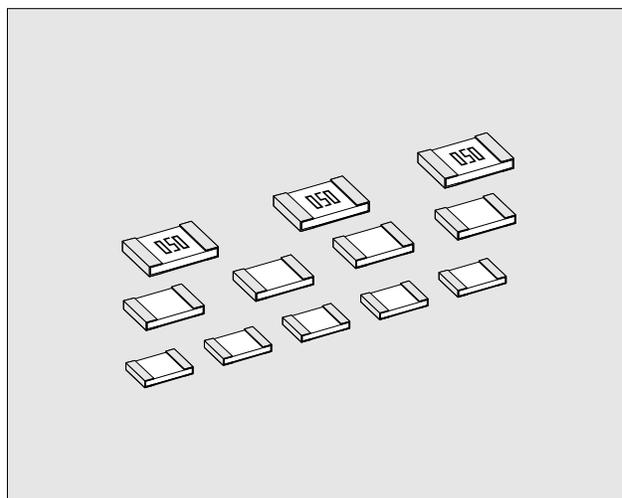
RCC Chip Resistors

●Features

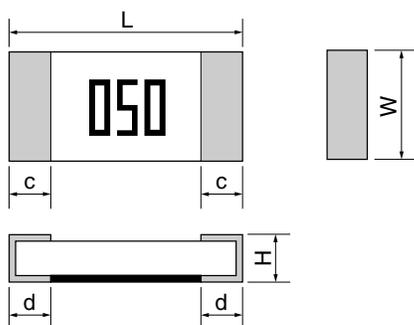
1. New lineup, 0402, 0603, 0805 size, Lower than 50mΩ
2. Suitable for current sensing of small mobile devices
3. Higher rated dissipation compared to RMC series (General use)
4. Pb*¹, Halogen*² and Antimony*³ free product

*¹ Pb ≤ 1000ppm*² Cl or Br ≤ 900ppm, Cl+Br ≤ 1500ppm*³ Sb₂O₃ ≤ 900ppm

5. Stability Class: 5%



●Dimensions



Resistance value is marking on surface.
Please refer to Rated Resistance table on page 23.
Please contact Kamaya Sales Dept. for marking of RCC16.
RCC10 is no marking.

Unit : mm

Style	Metric	Inch	L	W	H	c	d	*Unit weight/pc.
RCC10	1005	0402	1.0 ± 0.05	0.5 ± 0.05	0.35 ^{+0.05} / _{-0.10}	0.25 ^{+0.05} / _{-0.10}	0.25 ^{+0.05} / _{-0.10}	0.6mg
RCC16	1608	0603	1.6 ± 0.1	0.8 ^{+0.15} / _{-0.05}	0.5 ± 0.1	0.3 ± 0.1	0.3 ± 0.1	2mg
RCC20	2012	0805	2.0 ± 0.15	1.25 ± 0.10	0.6 ± 0.1	0.4 ± 0.2	0.4 ± 0.2	5mg

*Values for reference

●Part Number Description

Example

Style		R050	F	TP
RCC	20			
Product Type	Size	Rated Resistance	Tolerance on Rated Resistance	* Packaging & Standard Qty. (Min.)
	Code Metric Inch	e.g.: R050=50mΩ R100=100mΩ	F ± 1% J ± 5%	B Bulk (Loose Package) 1,000pcs. All style
	10 1005 0402			TH Paper Tape (2mm pitch) 10,000pcs. RCC10
	16 1608 0603			TP Paper Tape 5,000pcs. RCC16 RCC20
	20 2012 0805			

*Refer to Tape and Packaging information on page 52 and 53.

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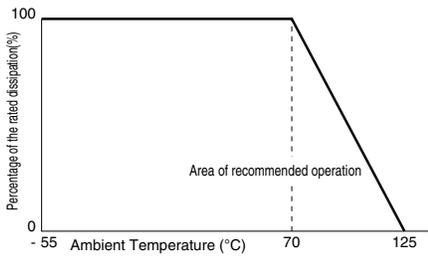
●Ratings

Style	Size Metric (Inch)	Rated Dissipation at 70°C W	Rated Current Range A	Combination of Rated Resistance Range and Temperature Coefficient of Resistance		Tolerance on Rated Resistance	Isolation Voltage V	Category Temperature Range °C	
				Rated Resistance Range	Temperature Coefficient of Resistance 10 ⁴ /°C				
RCC10	1005 (0402)	0.125	1.11 ~ 1.94	33mΩ ~ 50mΩ	0 ~ +350	F (± 1%) J (± 5%)	100	-55~+125	
				51mΩ ~ 100mΩ	± 150				
RCC16	1608 (0603)	0.25	1.58 ~ 2.75	33mΩ ~ 50mΩ	0 ~ +250				
				51mΩ ~ 100mΩ	± 150				
RCC20	2012 (0805)	0.33	2.56 ~ 4.06	20mΩ ~ 27mΩ	0 ~ +250				500
				30mΩ ~ 50mΩ	± 150				

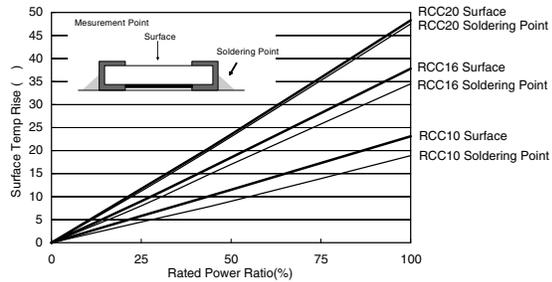
Note1. Rated Current = $\sqrt{(\text{Rated Dissipation})/(\text{Rated Resistance})}$
 Note2. Rated Voltage = $\sqrt{(\text{Rated Dissipation}) \times (\text{Rated Resistance})}$. (d.c. or a.c. r.m.s. Voltage)

●Derating Curve

The derated values of dissipation for temperatures in excess of 70°C shall be indicated by the following Curve.



●Surface Temperature Rise (Reference)



*Because values are different, please contact Kamaya sales department for the details about deployment condition and terms of use.

●Climatic Category

55/125/56

Lower Category Temperature -55°C
 Upper Category Temperature +125°C
 Duration of the Damp heat, Steady-State Test 56 days

●Rated Resistance

Resistance	Code	Mark
20mΩ	R020	020
22mΩ	R022	022
24mΩ	R024	024
25mΩ	R025	025
27mΩ	R027	027
30mΩ	R030	030
33mΩ	R033	033
36mΩ	R036	036
39mΩ	R039	039

Resistance	Code	Mark
40mΩ	R040	040
43mΩ	R043	043
47mΩ	R047	047
50mΩ	R050	050
51mΩ	R051	051
56mΩ	R056	056
60mΩ	R060	060
62mΩ	R062	062
65mΩ	R065	065

Resistance	Code	Mark
68mΩ	R068	068
70mΩ	R070	070
75mΩ	R075	075
80mΩ	R080	080
82mΩ	R082	082
90mΩ	R090	■90
91mΩ	R091	091
100mΩ	R100	R10

Please contact Kamaya Sales Dept. for any other resistance values.

●Performance Characteristics JIS C 5201-1 : 1998

Description	Requirements	Test Methods
Voltage proof	No breakdown or flashover R _≥ 1G ohm	Clause 4.7 RCC10,16 100Va.c.,60s RCC20 500Va.c.,60s
Variation of resistance with temperature	See Ratings Table	Clause 4.8 Measuring temperature : +20°C/+125°C/+20°C
Overload	ΔR _≤ ±1% No visible damage, legible marking	Clause 4.13 The applied voltage shall be 2.5 times of Rated Voltage, or equivalent current 2s.
Solderability	In accordance with Clause 4.17.4.5	Clause 4.17 235°C, 2s
Resistance to soldering heat	ΔR _≤ ±1%	Clause 4.18 After immersion into the flux, the immersion into solder shall be carried out in Solder bath at 260°C for 5s.
Rapid change of temperature	ΔR _≤ ±1% No visible damage	Clause 4.19 5 cycles between -55°C and +125°C.
Climatic sequence	ΔR _≤ ±5% No visible damage	Clause 4.23 Dry/Damp heat(12+12h cycle), first cycle/ Cold/Damp heat(12+12h cycle), remaining cycle./ D.C.Load.
Damp test, steady state	ΔR _≤ ±5% No visible damage, legible marking	Clause 4.24 40°C, 95%R.H., 56 days, test a) of Clause 4.24.2.1
Endurance at 70°C	ΔR _≤ ±5% No visible damage	Clause 4.25.1 Rated current, 1.5h "ON", 0.5h "OFF", 70°C, 1,000h.
Endurance at the upper category temperature	ΔR _≤ ±5% No visible damage	Clause 4.25.3 125°C, no-load, 1,000h.
Adhesion	No visible damage	Clause 4.32 5N, 10s
Bend strength of the face plating	ΔR _≤ ±1%	Clause 4.33 Amount of bend : 3 mm

●Precautions of use

1. Resistive element is on bottom surface.
Please note for inspection of parts existence & nonexistence, inversion mounting by Inspection machine.
2. Resistance value will be changed by soldering condition.
Please design products in consideration of this change of resistance value.