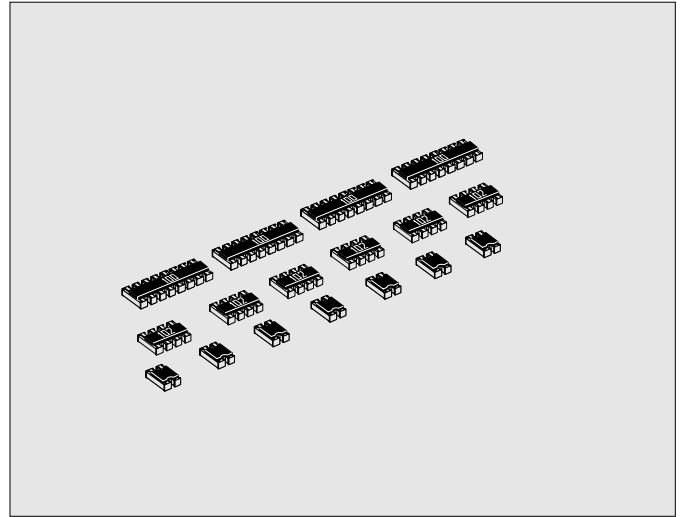


RAC

●Features

1. High-density SMD packaging contributes higher productivity and reduces assembly costs.
2. Please contact KAMAYA for Halogen and Antimony free product of RAC series.
3. Stability Class : 5%



●Dimensions and Circuits

RAC102D

**RAC104D
RAC164D**

RAC168D

Circuits

$R_1=R_2=\dots=R_n$

• Please contact KAMAYA for different resistance values.

Note. Please contact KAMAYA for the detail of marking on the over coating.

| Style | Terminal Style | L | W | H | Q ₁ | *Q ₂ | a | b | *P | *Unit weight/pc. |
|---------|----------------|----------|----------|-----------|----------------|-----------------|-----------|--|------|------------------|
| RAC102D | C | 1.0±0.05 | 1.0±0.05 | 0.35±0.05 | — | 0.33 | 0.15±0.10 | 0.25 ^{+0.05} _{-0.10} | 0.65 | 1.1mg |
| RAC104D | C | 2.0±0.1 | 1.0±0.1 | 0.35±0.05 | 0.35±0.1 | 0.45 | 0.15±0.10 | 0.25±0.10 | 0.5 | 2.1mg |
| RAC164D | C | 3.2±0.1 | 1.6±0.1 | 0.5 ±0.1 | 0.4 ±0.15 | 0.6 | 0.3 ±0.2 | 0.25±0.15 | 0.8 | 7mg |
| RAC168D | C | 3.8±0.1 | 1.6±0.1 | 0.45±0.1 | 0.3 ±0.1 | 0.3 | 0.3 ±0.1 | 0.3 ±0.1 | 0.5 | 8.3mg |

Unit : mm
*Values for reference

●Part Number Description

Example

| | | | | | | | | |
|--------------|--------------------------|--|-------------|---|--|------------------------------|------------------------------------|-------------------------------|
| Style | RAC | 10 | 2 | D | 103 | J | C | B |
| Product Type | Size | No. of Elements | Circuits | Rated Resistance | Tolerance on Rated Resistance | Terminal Style | * Packaging & Standard Qty. (Min.) | |
| | 10 W:1.0mm 16 W:1.6mm | 2 2-Elements 4 4-Elements 8 8-Elements | D Isolation | E24 Series e.g.:103=10k ohm Resistor JP Jumper | F ±1% J ±5% None Resistor None Jumper | C Convex Type With corner | B Bulk (Loose Package) | 1,000pcs. All Styles |
| | | | | | | | TH Paper Tape (2 mm pitch) | 10,000pcs. RAC102D RAC104D |
| | | | | | | | TP Paper Tape | 5,000pcs. RAC164D RAC168D |

*Refer to Tape and Packaging information on pages 54 and 55.

FIXED CHIP RESISTOR NETWORKS; RECTANGULAR TYPE

RAC

●Ratings

| Style | Rated Dissipation at 70°C | | Rated Current of Jumper A | Rated Resistance Range | Tolerance on Rated Resistance | Temperature Coefficient of Resistance 10 ⁵ /°C | Limiting Element Voltage V | Preferred Number Series for Resistors | Isolation Voltage V | Category Temperature Range °C |
|---------|---------------------------|-------|---------------------------|------------------------|-------------------------------|---|----------------------------|---------------------------------------|---------------------|-------------------------------|
| | W/Element | W/pc. | | | | | | | | |
| RAC102D | 0.063 | 0.125 | 1.0 | 10Ω~1MΩ | J(±5%) | ±200 | 25 | E24 | 50 | -55~+125 |
| RAC104D | | 0.25 | | | F(±1%)J(±5%) | | 50 | | | |
| RAC164D | | | | | J(±5%) | | 25 | | | |
| RAC168D | | | | | | | | | | |

Note1. Rated Voltage = √(Rated Dissipation)×(Rated Resistance). (d.c. or a.c. r.m.s. Voltage)

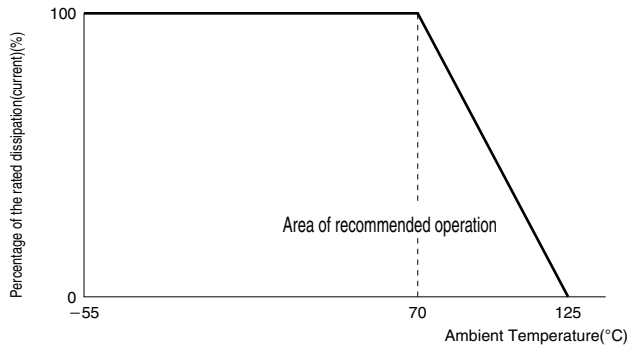
Note2. Limiting Element Voltage can only be applied to resistors when the resistance value is equal to or higher than the critical resistance value.

Note3. Critical Resistance Value is the resistance value at which the rated voltage is equal to the limiting element voltage.

●Derating Curve

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

(For Jumpers the load current shall be derated according to the Derating Curve)



●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

●Performance Characteristics JIS C 5201-1 : 1998

| Description | Requirements | Test Methods |
|---|--|---|
| Voltage proof | No breakdown or flashover R _≥ 1G ohm | Clause 4.7 RAC102D, 104D 50Va.c.,60s RAC164D, 168D 100Va.c.,60s |
| Variation of resistance with temperature | See Ratings Table | Clause 4.8 Measuring temperature : +20°C/-55°C/+20°C/+125°C/+20°C |
| Overload | ΔR _≤ ±(1%+0.05 ohm) No visible damage, legible marking | Clause 4.13 The applied voltage shall be 2.5 times of the rated voltage or twice of the limiting element voltage, whichever is the less severe, 2s. |
| Solderability | In accordance with Clause 4.17.4.5 | Clause 4.17 235°C, 2s |
| Resistance to soldering heat | ΔR _≤ ±(1%+0.05 ohm) | 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%+0.05 ohm) No visible damage | Clause 4.19 5 cycles between -55°C and +125°C. |
| Climatic sequence | ΔR _≤ ±(5%+0.1 ohm) 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%+0.1 ohm) No visible damage, legible marking | Clause 4.24 40°C, 95%R.H., 56 days, test a) and b) of Clause 4.24.2.1 |
| Endurance at 70°C | ΔR _≤ ±(5%+0.1 ohm) No visible damage | Clause 4.25.1 Rated voltage, 1.5h "ON", 0.5h "OFF", 70°C, 1,000h. |
| Endurance at the upper category temperature | ΔR _≤ ±(5%+0.1 ohm) 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%+0.05 ohm) | Clause 4.33 Amount of bend : 3 mm |