

FIXED THICK FILM CHIP RESISTORS; RECTANGULAR TYPE & ANTI SURGE

KAMAYA OHM

RPC

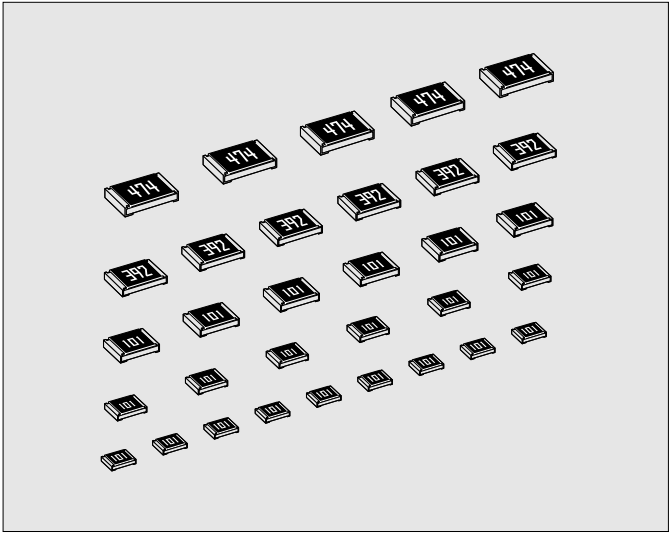
- Features
1. Higher Anti surge performance compared with RMC (general use)

2. Halogen*1 and Antimony*2 free product

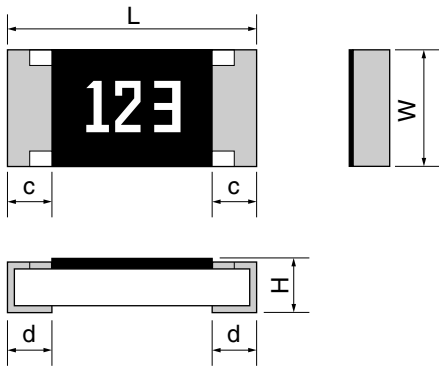
*1 Cl or Br≤900ppm, Cl+Br≤1500ppm

*2 Sb2O3≤900ppm

3. Stability Class : 5%



●Dimensions



Rated resistance value is marked with 3-digit on the over coating.

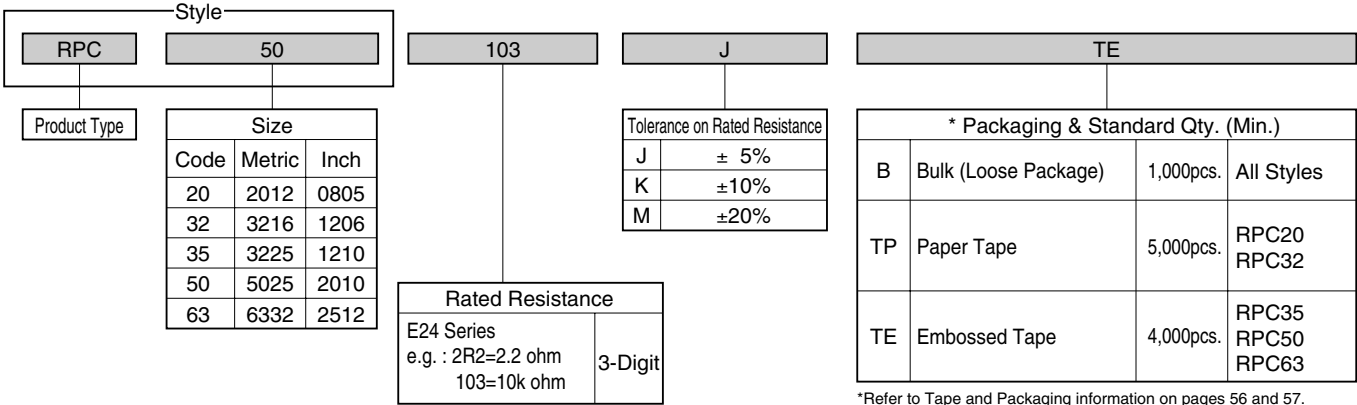
Unit : mm

| Style | Metric | Inch | L | W | H | c | d | *Unit weight/pc. |
|-------|--------|------|----------|------------|-----------|----------|----------|------------------|
| RPC20 | 2012 | 0805 | 2.0±0.1 | 1.25 ±0.10 | 0.55±0.10 | 0.3±0.2 | 0.4±0.2 | 5mg |
| RPC32 | 3216 | 1206 | 3.2±0.15 | 1.6 ±0.15 | 0.55±0.10 | 0.3±0.2 | 0.5±0.25 | 9mg |
| RPC35 | 3225 | 1210 | 3.2±0.15 | 2.5 ±0.15 | 0.55±0.15 | 0.3±0.2 | 0.5±0.25 | 16mg |
| RPC50 | 5025 | 2010 | 5.0±0.15 | 2.5 ±0.15 | 0.55±0.15 | 0.3±0.15 | 0.6±0.2 | 25mg |
| RPC63 | 6332 | 2512 | 6.3±0.15 | 3.2 ±0.15 | 0.55±0.15 | 0.3±0.15 | 0.6±0.2 | 40mg |

*Values for reference

●Part Number Description

Example



*Refer to Tape and Packaging information on pages 56 and 57.

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●Ratings

| Style | Size Metric (Inch) | Rated Dissipation at 70°C W | Combinations of Rated Resistance Range and Temperature Coefficient of Resistance | | Tolerance on Rated Resistance | Limiting Element Voltage V | Preferred Number Series for Resistors | Isolation Voltage V | Category Temperature Range °C |
|-------|--------------------|-----------------------------|---|--|---|----------------------------|---------------------------------------|---------------------|-------------------------------|
| | | | Rated Resistance Range | Temperature Coefficient of Resistance 10 ⁻⁶ /°C | | | | | |
| RPC20 | 2012 (0805) | 0.125 | <div>0.27Ω~0.91Ω ±200</div> <div>1Ω~ 1MΩ ±100</div> <div>1.1M~22MΩ ±200</div> | | <div>J (± 5%)</div> <div>K (±10%)</div> <div>M (±20%)</div> | 150 | E24 | 500 | -55~+155 |
| RPC32 | 3216 (1206) | 0.25 | | | | | | | |
| RPC35 | 3225 (1210) | 0.5 | | | | | | | |
| RPC50 | 5025 (2010) | 0.75 | | | | | | | |
| RPC63 | 6332 (2512) | 1.0 | | | | | | | |
| | | | | | | 200 | | | |

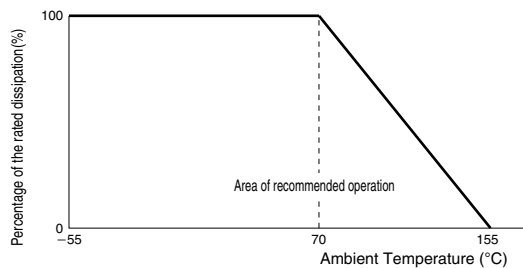
Note1. Rated Voltage = $\sqrt{(\text{Rated Dissipation}) \times (\text{Rated Resistance})}$. (d.c. or a.c. r.m.s. Voltage)

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.

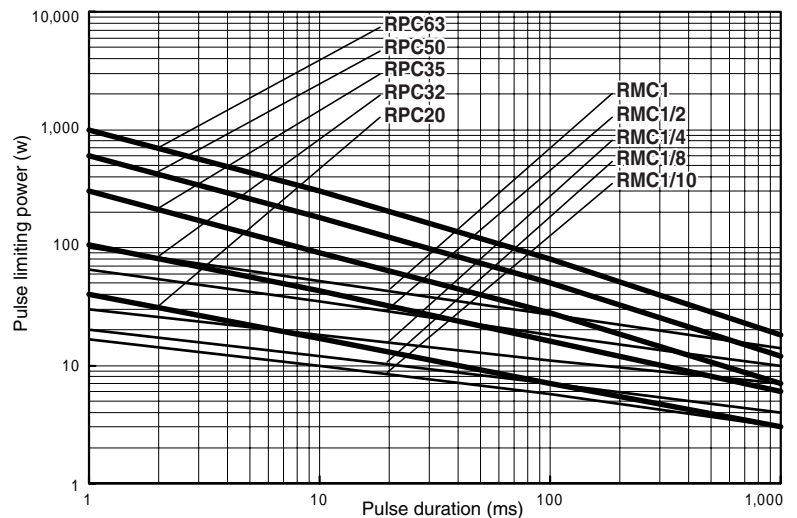


●Climatic Category

55/155/56

Lower Category Temperature -55°C
Upper Category Temperature +155°C
Duration of the Damp heat, Steady-Style Test 56 days

●1Pulse Limiting Power Curve (e.g 100Ω value for reference)



* pulse limiting power curve is different from resistance value.

* Please contact Kamaya sales department for the details.

●Performance Characteristics JIS C 5201-1 : 1998

| Description | Requirements | Test Methods |
|---|---|---|
| Voltage proof | No breakdown or flashover $R \geq 1G \text{ ohm}$ | Clause 4.7 500Va.c., 60s |
| Variation of resistance with temperature | See Ratings Table | Clause 4.8 +20°C/-55°C/+20°C/+155°C/+20°C |
| Overload | $\Delta R \leq \pm(1\%+0.05 \text{ ohm})$ 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 | $\Delta R \leq \pm(1\%+0.05 \text{ ohm})$ | 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 | $\Delta R \leq \pm(1\%+0.05 \text{ ohm})$ No visible damage | Clause 4.19 Cycle : -55°C/+155°C 5times |
| Climatic sequence | $\Delta R \leq \pm(5\%+0.1 \text{ ohm})$ 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 | $\Delta R \leq \pm(5\%+0.1 \text{ ohm})$ 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 | $\Delta R \leq \pm(5\%+0.1 \text{ ohm})$ 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 | $\Delta R \leq \pm(5\%+0.1 \text{ ohm})$ No visible damage | Clause 4.25.3 155°C, no-load, 1,000h. |
| Adhesion | No visible damage | Clause 4.32 5N, 10s |
| Bend strength of the face plating | $\Delta R \leq \pm(1\%+0.05 \text{ ohm})$ | Clause 4.33 RPC20, 32, 35 Amount of bend : 3 mm RPC50, 63 Amount of bend : 1 mm |