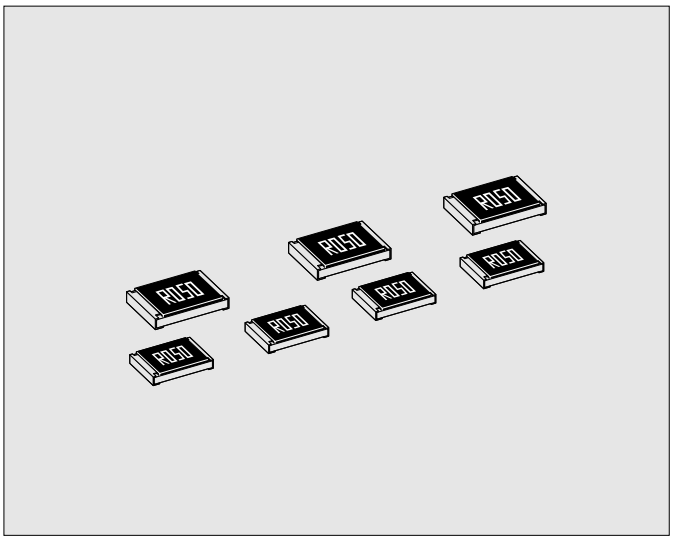
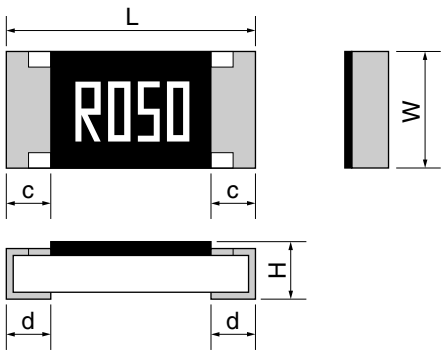
RLS

●Features

1. Suitable for current detection of high-precision circuits (power supply, motor, etc.)
2. Stability Class : 5%



●Dimensions



Rated resistance value is marked with 4-digit on the over coating.

Unit : mm

Style	Metric	Inch	L	W	H	c	d	*Unit weight/pc.
RLS50	**5025**	**2010**	5.0±0.2	2.5±0.15	0.6±0.15	0.6±0.2	0.6±0.2	25mg
RLS63	**6332**	**2512**	6.3±0.2	3.2±0.15	0.6±0.15	0.6±0.2	0.6±0.2	40mg

*Values for reference

●Part Number Description

Example

Style

RLS	50	R050	F	TE
Product Type	Size	Rated Resistance	Tolerance on Rated Resistance	* Packaging & Standard Qty. (Min.)

Code	Metric	Inch
50	5025	2010
63	6332	2512

e.g.: R050=50m ohm
R100=100m ohm

F	±1%
G	±2%
J	±5%

B	Bulk (Loose Package)	1,000pcs.
TE	Paper Tape	4,000pcs.

*Refer to Tape and Packaging information on pages 48 and 49.

●Ratings

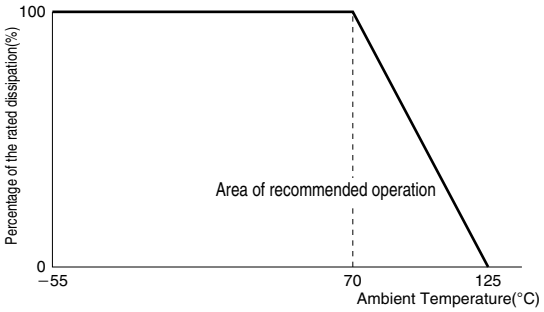
Style	Size Metric (Inch)	Rated Dissipation at 70°C W	Rated Current Range A	Combinations of Rated Resistance Range and Temperature Coefficient of Resistance		Tolerance on Rated Resistance	Isolation Voltage V	Category Temperature Range °C
				Rated Resistance Range	Temperature Coefficient of Resistance 10^{-6}/°C			
RLS50	5025 (2010)	0.75	1.93～6.12	20mΩ～ 33mΩ	0～ +350	F(±1%) G(±2%) J(±5%)	500	−55～+125
				36mΩ～ 47mΩ	0～ +200			
RLS63	6332 (2512)	1.0	2.23～7.07	50mΩ～200mΩ	0～ +100			

Note1. Rated Current = $\sqrt{\text{(Rated Dissipation)/(Rated Resistance)}}$
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.

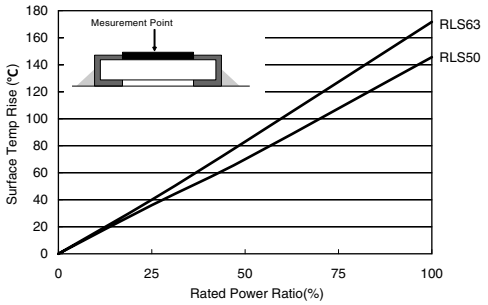


●Climatic Category

55/125/56

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

●Surface Temperature Rise (Reference)



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

●Rated Resistance

Resistance	Code
20mΩ	R020
22mΩ	R022
24mΩ	R024
25mΩ	R025
27mΩ	R027
30mΩ	R030

Resistance	Code
33mΩ	R033
36mΩ	R036
39mΩ	R039
40mΩ	R040
43mΩ	R043
47mΩ	R047

Resistance	Code
50mΩ	R050
51mΩ	R051
56mΩ	R056
60mΩ	R060
62mΩ	R062
65mΩ	R065

Resistance	Code
68mΩ	R068
70mΩ	R070
75mΩ	R075
80mΩ	R080
82mΩ	R082
90mΩ	R090

Resistance	Code
91mΩ	R091
100mΩ	R100
110mΩ	R110
120mΩ	R120
130mΩ	R130
150mΩ	R150

Resistance	Code
160mΩ	R160
180mΩ	R180
200mΩ	R200

Note3. Other nominal resistance values are also available, please contact KAMAYA for further information.

●Performance Characteristics JIS C 5201-1 : 1998

Description	Requirements	Test Methods
Voltage proof	No breakdown or flashover R≥1G ohm	Clause 4.7 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 rated voltage×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 : 1 mm