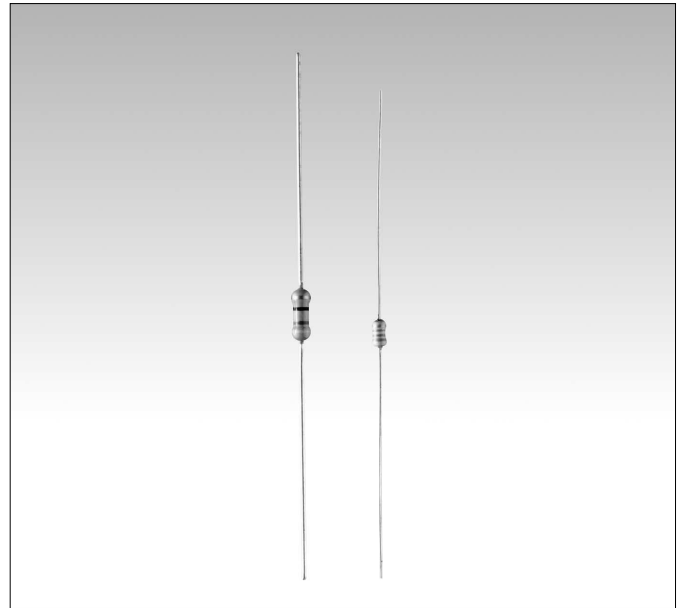


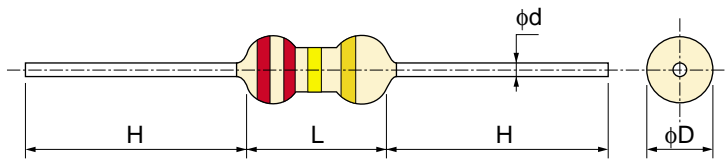
# RD1/6, 1/4S, 1/4, 1/2S

## ●Features

1. Three sizes are available 1/6, 1/4, 1/2W.
2. Structure suitable for auto-insertion processing.
3. Stability class : 5%



## ●Dimensions



Unit : mm

Style	L	D	H	d	*Unit weight/pc.
RD1/6, 1/4S	3.2±0.2	1.8±0.1	30±3	0.45±0.05	108mg
RD1/4, 1/2S	6.5±0.5	2.4±0.2		0.55±0.05	217mg

\*Values for reference

## ●Product Classification

Example

RD      1/4  
 ①Product Type    ②Rated power

Style

①Product Type

②Rated power	
Code	Rated power
1/6	0.167W
1/4·1/4S	0.25W
1/2S	0.5W

103  
 ③Rated Resistance

③Rated Resistance
E24 Series e.g : 2R2=2.2 ohm 103=10k ohm

J  
 ④Tolerance on Rated Resistance

④Tolerance on Rated Resistance	
Code	Tolerance on Rated Resistance
G	±2%
J	±5%

B  
 ⑤Packaging

*⑤Packaging	
Code	Packaging
B	Bulk (Straight)
H	Horizontal Forming
TA	26 mm Width Taping(Ammo Box)
TB	52 mm Width Taping(Ammo Box)
TL	52 mm Width Taping(Reel)

\*Refer to Taping and Packaging information in page 62. 63. 64

FIXED CARBON FILM RESISTORS RD1/6, 1/4S, 1/4, 1/2S

●Ratings

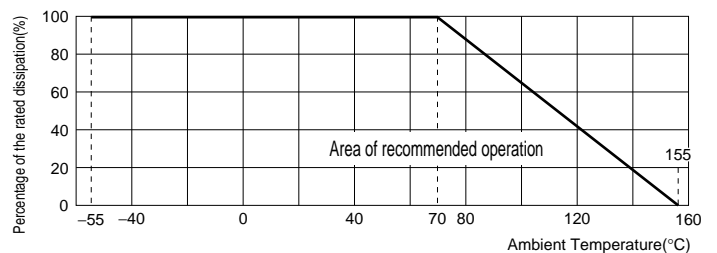
Style	Rated Dissipation at 70°C W	Rated Current of Jumper	Rated Resistance Range	Tolerance on Rated Resistance	Preferred Number Series for Resistors	Isolation Voltage V	Category Temperature Range °C
RD1/6	0.167	200	10 ohm~ 470k ohm	G(±2%)	E24 Series	300	-55~+155
			1.0 ohm~ 2.2M ohm	J(±5%)			
RD1/4S	0.25	250	10 ohm~ 470k ohm	G(±2%)			
			1.0 ohm~ 2.2M ohm	J(±5%)			
RD1/4	0.25	250	10 ohm~ 1M ohm	G(±2%)		500	
			1.0 ohm~ 2.2M ohm	J(±5%)			
RD1/2S	0.5	350	10 ohm~ 1M ohm	G(±2%)			
			1.0 ohm~ 2.2M ohm	J(±5%)			

Note.1 Rated Voltage =  $\sqrt{(\text{Rated Power}) \times (\text{Rated Resistance})}$ . (d.c. or a.c. r.m.s. Voltage)

Note.2 Limiting Element Voltage can only be applied to resistors when the resistance value is equal to or higher than the critical resistance value.

●Derating Curve

The derated values of dissipation at temperature in excess of 70°C shall be as 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-State Test 56days

●Performance Characteristics JIS C 5201-1 : 1998

Description	Requirements	Test Methods																							
Voltage proof	No breakdown or flashover	Clause 4.7 V-block method RD1/6, 1/4S 300Va.c.,60S RD1/4, 1/2S 500Va.c.,60S																							
Variation of resistance with Temperature	T.C.R.(10 <sup>-6</sup> /°C)																								
	<table border="1"> <thead> <tr> <th colspan="2">1/6, 1/4S</th> <th colspan="2">1/4, 1/2S</th> </tr> </thead> <tbody> <tr> <td>R≤4.7 ohm</td> <td>0~+350</td> <td>R&lt;100 ohm</td> <td>±350</td> </tr> <tr> <td>4.7 ohm &lt;R&lt;47k ohm</td> <td>0~450</td> <td>100 ohm &lt;R&lt;36k ohm</td> <td>0~350</td> </tr> <tr> <td>47 ohm ≤R&lt;470k ohm</td> <td>0~700</td> <td>36k ohm ≤R&lt;510k ohm</td> <td>0~650</td> </tr> <tr> <td>470k ohm ≤R≤1M ohm</td> <td>0~1,000</td> <td>510k ohm ≤R≤1M ohm</td> <td>0~1,000</td> </tr> <tr> <td>1M ohm &lt;R≤2.2M ohm</td> <td>0~1,200</td> <td>1M ohm &lt;R≤2.2M ohm</td> <td>0~1,200</td> </tr> </tbody> </table>	1/6, 1/4S		1/4, 1/2S		R≤4.7 ohm	0~+350	R<100 ohm	±350	4.7 ohm <R<47k ohm	0~450	100 ohm <R<36k ohm	0~350	47 ohm ≤R<470k ohm	0~700	36k ohm ≤R<510k ohm	0~650	470k ohm ≤R≤1M ohm	0~1,000	510k ohm ≤R≤1M ohm	0~1,000	1M ohm <R≤2.2M ohm	0~1,200	1M ohm <R≤2.2M ohm	0~1,200
1/6, 1/4S		1/4, 1/2S																							
R≤4.7 ohm	0~+350	R<100 ohm	±350																						
4.7 ohm <R<47k ohm	0~450	100 ohm <R<36k ohm	0~350																						
47 ohm ≤R<470k ohm	0~700	36k ohm ≤R<510k ohm	0~650																						
470k ohm ≤R≤1M ohm	0~1,000	510k ohm ≤R≤1M ohm	0~1,000																						
1M ohm <R≤2.2M ohm	0~1,200	1M ohm <R≤2.2M ohm	0~1,200																						
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, 5s.																							
Robustness of Terminations	Tensile	Clause 4.16.2 ΔR≤±(1%+0.05 ohm) No visible damage RD1/6,1/4S : 5N RD1/4,1/2S : 10N for 5~10s																							
	Bending	Clause 4.16.3 ΔR≤±(1%+0.05 ohm) No visible damage RD1/6,1/4S : 2.5N RD1/4,1/2S : 5N twice																							
	Torsion	Clause 4.16.4 ΔR≤±(1%+0.05 ohm) No visible damage 180°C 2 rotation																							
Solderability	In accordance with Clause 4.17.4.5	Clause 4.17 235°C, 2s																							
Resistance to soldering heat	ΔR≤±(1%+0.05 ohm) No visible damage, legible marking	Clause 4.18 After immersion into the flux, the immersion into solder shall be carried out in solder bath at 350°C for 3.5s.																							
Rapid change of temperature	ΔR≤±(1%+0.05 ohm) No visible damage	Clause 4.19 5 cycles between -55°C and +155°C.																							
Climatic sequence	ΔR≤±(5%+0.1 ohm) Insulation resistance : R≥100M 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) Insulation resistance : R≥100M ohm No visible damage, legible marking	Clause 4.24 40°C 95%R.H. 56days, test a),b)and c) of Clause 4.24.2.1																							
Endurance at 70°C	ΔR≤±(5%+0.1 ohm) No visible damage Insulation resistance : R≥1G ohm	Clause 4.25.1 Rated voltage, 1.5h "ON", 0.5h "OFF", 70°C, 1000h.																							
Endurance at the upper Category temperature	R≤±(5%+0.1 ohm) No visible damage Insulation resistance : R≥1G ohm	Clause 4.25.3 155°C, no-load, 1000h.																							