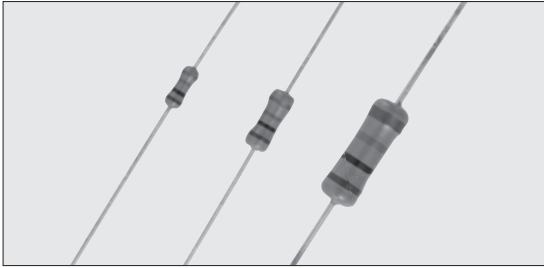


RK RK1/2G Coat Insulated Glazed Metal Film Fixed Resistors Discharge Path Resistors



Coating color : Light gray
Marking : Color code

Features

- Responsible to resistance tolerance $\pm 1\%$ and T.C.R. $\pm 100 \times 10^{-6}/K$.
- Resistors up to high resistance range in small sizes are available.
- Highly stable against environmental conditions and overload.
- Products meet EU-RoHS requirement. EU-RoHS regulation is not intended for Pb-glass contained in resistor element.

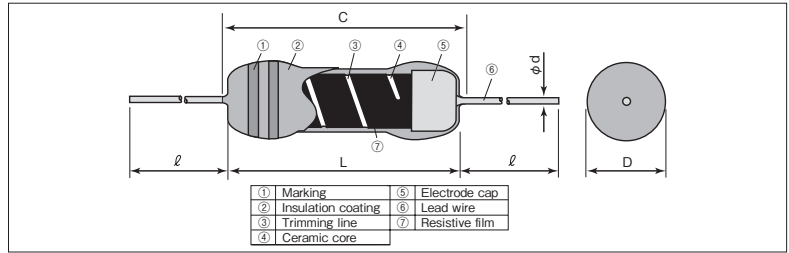
Approval Awarded

- UL1676 c-UL (CSA-C22.2 No.1-M94) (File No.E159326) Recognized. Products Discharge Path Resistors RK 1/2GC

Reference Standards

- EIAJ RC-2128

Construction



Dimensions

Type	Dimensions (mm)					Weight (g) (1000pcs)
	L	C Max.	D	d(Nominal)	l^{*2}	
RK 1/4	6.3 ± 0.5	7.1	2.3 ± 0.3	0.6	24 Min.	250
RK 1/2	9.5 ± 1.0	11.1	3.5 ± 0.4	0.8	38 ± 3	380
RK 1	15.5 ± 1.0	18.3	5.5 ± 0.5	0.8	38 ± 3	1340
RK 1/2G ^{*1}	9.5 ± 1.0	11.1	3.5 ± 0.4	0.6	24 Min.	380

*1 Discharge path resistor

*2 Lead length changes depending on taping and forming type.

Type Designation

Example

RK	1/4	B	C	T52	A	106	J
Product Code	Power Rating	T.C.R. ($\times 10^{-6}/K$)	Terminal Surface Material	Taping & Forming	Packaging	Nominal Resistance	Resistance Tolerance
	1/4: 0.25W 1/2: 0.5W 1: 1W	D: ± 100 L: ± 200 G: ± 250 B: ± 350	C: SnCu	See table below	A: AMMO R: REEL Nil: BOX	F: 4 digits G, J: 3 digits	F: $\pm 1\%$ G: $\pm 2\%$ J: $\pm 5\%$

Contact us when you have control request for environmental hazardous material other than the substance specified by EU-RoHS.

For further information on taping and forming, please refer to APPENDIX C on the back pages.

Taping & Forming Matrix

Type	Axial Taping			U Forming	L Forming		M Forming				
	T26	T52	T521	U	L10A	L20A	M10		M12.5	M15	
RK1/4□C	○	○	—	○	○	—	M10F	M10R	M12.5R	—	—
RK1/2□C	—	○	—	—	—	—	—	—	M12.5F	M15F	M15R
RK1□C	—	—	○	—	—	○	—	—	—	—	—
RK1/2GC	—	○	—	—	—	—	—	—	M12.5F	M15F	M15R

□ : T.C.R.

Ratings

Type	Power Rating	T.C.R. ($\times 10^{-6}/K$)	Resistance Range (Ω)			Max. Working Voltage	Max. Overload Voltage	Dielectric Withstanding Voltage	Taping & Q'ty/AMMO (pcs)		
			F: $\pm 1\%$ E24 · E96	G: $\pm 2\%$ E24	J: $\pm 5\%$ E24				T26A	T52A	T521A
RK1/4DC	0.25W	D: ± 100	3.09M~25M	—	—	500V	700V	500V	2,000	2,000	—
RK1/4LC		L: ± 200	—	3.3M~33M	3.3M~33M						—
RK1/4BC		B: ± 350	100k~25M	100k~33M	100k~33M						—
RK1/2DC	0.5W	D: ± 100	5.11M~33M	—	—	700V	1000V	700V	—	—	—
RK1/2LC		L: ± 200	—	6.2M~33M	6.2M~33M						—
RK1/2BC		B: ± 350	100k~35M	100k~51M	100k~51M						—
RK1BC	1W	B: ± 350	100k~51M	100k~100M	100k~100M	1000V	1500V	1000V	—	—	500
RK1/2GC ^{*3}	0.5W	G: ± 250	—	—	1M~12M	350V	700V	700V	—	2,000	—

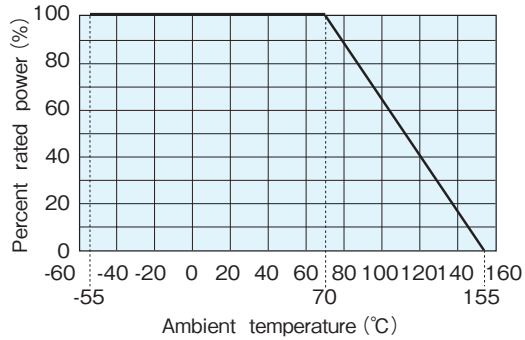
*3 Discharge path resistor

Rated Ambient Temperature : $+70^\circ C$

Operating Temperature Range : $-55^\circ C \sim +155^\circ C$

Rated voltage = $\sqrt{\text{Power Rating} \times \text{Resistance value}}$ or Max. working voltage, whichever is lower.

Derating Curve



For resistors operated at an ambient temperature of 70°C or higher, the power shall be derated in accordance with the above derating curve.

Performance

Test Items	Performance Requirements $\Delta R \pm (\% + 0.05\Omega)$		Test Methods
	Limit	Typical	
Resistance	Within specified tolerance	—	25°C
T.C.R.	Within specified T.C.R.	—	+ 25°C / + 125°C
Overload (Short time)	1 : RK 2.5 : RK1/2G	0.6 : RK 1 : RK1/2G	Rated voltage $\times 2.5$ or Max. overload vol., whichever is lower, for 5s
Resistance to soldering heat	1 : RK 5 : RK1/2G	0.5 : RK 1 : RK1/2G	260°C $\pm 5^\circ\text{C}$, 10s $\pm 1\text{s}$ or 350°C $\pm 10^\circ\text{C}$, 3.5s $\pm 0.5\text{s}$
Dielectric withstanding voltage	No breakdown	—	1 min.
Insulation resistance	Not less than 10,000M Ω	—	100V, 1 min.
Rapid change of temperature	1 : RK 5 : RK1/2G	0.5 : RK 1 : RK1/2G	-55°C (30min.) / +155°C (30min.) 5 cycles
Moisture resistance	5 : RK 10 : RK1/2G	2 : RK 5 : RK1/2G	40°C $\pm 2^\circ\text{C}$, 90%~95%RH, 1000h 1.5h ON / 0.5h OFF cycle
Endurance at 70°C	5 : RK 10 : RK1/2G	2 : RK 5 : RK1/2G	70°C $\pm 2^\circ\text{C}$, 1000h 1.5h ON / 0.5h OFF
Resistance to solvent	No abnormality in appearance. Marking shall be easily legible.	—	The resistor shall be immersed for 5s in IPA.
Impulse	No such abnormalities as short-circuit, burnout, breakdown, etc.	—	Discharge from 1000pF capacitor 50 pulses. Interval 2.5s Charge voltage : 1.25kV (RK1/4), 2.5kV (RK1/2) and 6kV (RK1).