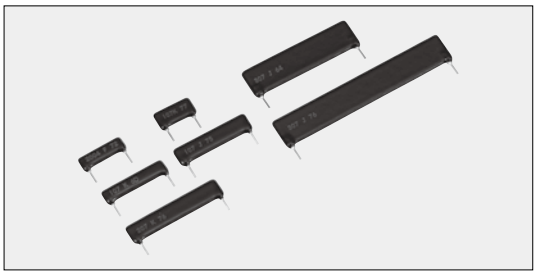
RK92 Thick Film Resistors For High Voltage



Coating color : Black
Marking : Alphanumeric

■Features

- High resistance resistors for high voltage circuits.
- Thin SIP shape.
- The flame retardant coats corresponding to UL94V-0 are used.
- Thick film resistors (RuO_2) ensure high stabilities in life and change in aging.
- Products with lead free termination meet EU-RoHS requirements. EU-RoHS regulation is not intended for Pb-glass contained in electrode, resistor element and glass.

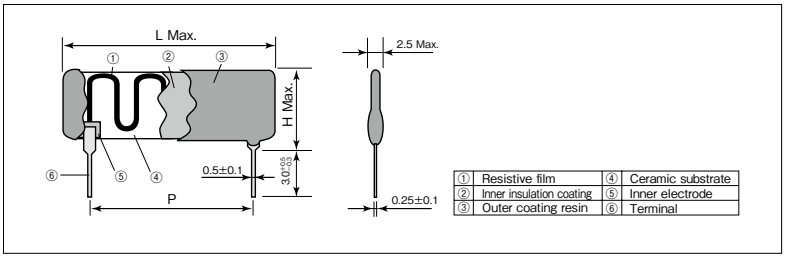
■Applications

- PPCs
- LBPs
- Air conditioners
- Microwave ovens
- High voltage circuits for fly-back transformers, etc.

■Reference Standards

IEC 60115-1
JIS C 5201-1

■Construction



■Dimensions

Style	Max. Workin Vol. Symbol	Dimensions (mm)			Weight(g) (1000pcs)
		L Max.	H Max.	P±0.2	
4L	Nil	12.7	5.08	10.16	196
5L	Nil	15.3		12.7	227
6L	Nil	17.8		15.24	258
3C	Nil or 4	10.8	6.5	7.62	194
4C	5	13.3		10.16	241
5C	Nil or 6	15.8		12.7	286
6C	7	18.4		15.24	331
7C	Nil or 8	20.9		17.78	377
8C	Nil or 9	23.5		20.32	422
9C	Nil	26.0		22.86	468
11X	Nil	31.0	10	27.94	1007
18X	Nil	48.9		45.72	1672
18D	Nil	48.9	13.2	45.72	2373

■Type Designation

Example

RK92 – 3C – 4 – D – 1004 – F – 50

Product Code	Style	Max. Working Voltage symbol	Terminal Surface Material	Nominal Resistance	Resistance Tolerance	T.C.R. (×10⁻⁶/K)
RK92 (Standard)	4L 5L 6L 3C 5C 7C 8C 9C 11X 18X 18D	Nil	D : SnAgCu (L : Sn/Pb)	F : 4digits G, J, K, M : 3digits	F : ±1% G : ±2% J : ±5% K : ±10% M : ±20%	Nil
						100
RK92 (Presison)	18D	Nil	D : SnAgCu	D, F : 4digits	D : ±0.5% F : ±1%	100
	3C	4 (kV)				50
	4C	5 (kV)				
	5C	6 (kV)				
	6C	7 (kV)				
	7C	8 (kV)				
	8C	9 (kV)				

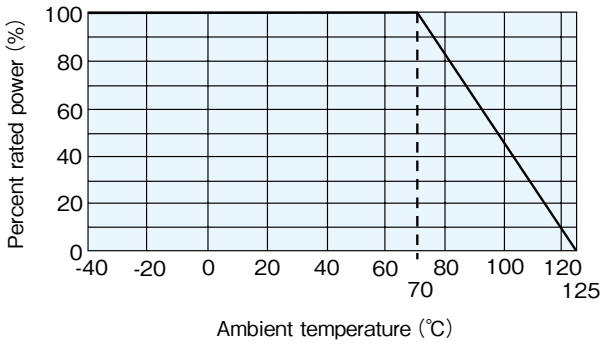
Contact us when you have control request for environmental hazardous material other than the substance specified by EU-RoHS.
The terminal surface material lead free is standard.

■Ratings

Style	Max. Working Vol. symbol	Power Rating	Resistance Range (Ω) E12・2×10ⁿ・3×10ⁿ・4×10ⁿ・5×10ⁿ						T.C.R. (×10⁻⁶/K)	Max. Working Voltage	Rated Ambient Temp.	Operating Temp. Range
			D : ±0.5%	F : ±1%	G : ±2%	J : ±5%	K : ±10%	M : ±20%				
4L	Nil	0.5W	—	2M～10M	2M～10M	—	—	—	±300	1kV	+70℃	−40℃～+125℃
5L	Nil	0.5W	—	1M～500M	1M～500M	1M～1G	1M～1G	1M～1G		10kV		
6L	Nil	0.6W	—	1M～500M	1M～500M	1M～1G	1M～1G	1M～1G				
3C	Nil	0.5W	—	1M～500M	1M～500M	1M～1G	1M～1G	1M～1G		7kV		
5C	Nil	0.75W	—	1M～500M	1M～500M	1M～1G	1M～1G	1M～1G		10kV		
7C	Nil	0.85W	—	1M～500M	1M～500M	1M～1G	1M～1G	1M～1G				
8C	Nil	1.0W	—	1M～500M	1M～500M	1M～1G	1M～1G	1M～1G				
9C	Nil	1.1W	—	1M～500M	1M～500M	1M～1G	1M～1G	1M～1G				
11X	Nil	1.7W	—	1M～500M	1M～500M	1M～1G	1M～1G	1M～1G				
18X	Nil	2.7W	—	1M～500M	1M～500M	1M～1G	1M～1G	1M～1G		15kV		
18D	Nil	4W	1M～100M	1M～500M	1M～500M	1M～1G	1M～1G	1M～1G	±100			
3C	4	0.5W	1M～100M	1M～100M	—	—	—	—	±50	4kV		
4C	5	0.6W	1M～100M	1M～100M	—	—	—	—		5kV		
5C	6	0.75W	1M～150M	1M～150M	—	—	—	—		6kV		
6C	7	0.8W	1M～150M	1M～150M	—	—	—	—		7kV		
7C	8	0.85W	1M～200M	1M～200M	—	—	—	—		8kV		
8C	9	1W	1M～200M	1M～200M	—	—	—	—		9kV		

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

■Derating Curve



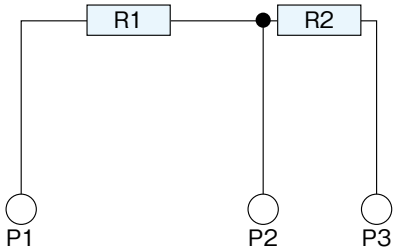
For resistors operated at an ambient temperature of 70℃ or higher, the power shall be derated in accordance with the above derating curve.

■Performance

Test Items	Performance Requirements ΔR±(%+0.05Ω)		Test Methods
	Limit	Typical	
Resistance	Within specified tolerance	—	25℃
T.C.R.	Within specified T.C.R.	—	+25℃/+125℃
Resistance to soldering heat	1	0.5	260℃±5℃, 10s±1s
Rapid change of temperature	1	0.5	−40℃ (30min.) /+125℃ (30min.) 5 cycles
Moisture resistance	5	3	40℃±2℃, 90%～95%RH, 1000h
Endurance	5	3	25℃ 1000h Rated voltage

■3 terminals product

• Circuit Schematics



• Resistance Value The partial Ratio, Terminal pitch, The dimensions, Please refer to us.

■Precaution for Use

• The conditions for lead-free terminal resistors are set up at 260℃ Max. within 10s.