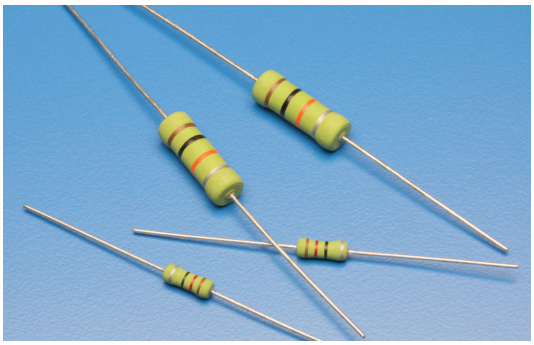
KOA SPEER ELECTRONICS, INC.

PCF

ceramic resistors for anti pulse surge

EU RoHS COMPLIANT

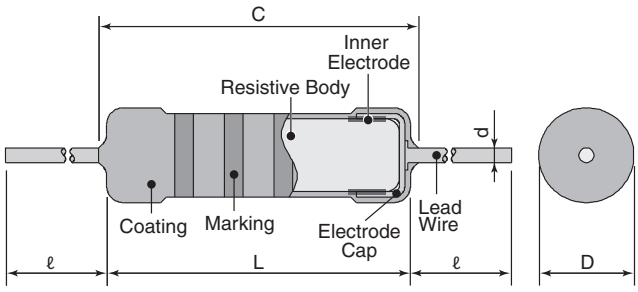


features

- KOA original bulk ceramic resistors
- Flame retardant coating (Equivalent of UL94V0)
- Excellent in in-pulse and inrush current characteristics
- Non-inductive resistors
- Products meet EU RoHS requirements
- Higher reliability against disconnection compared to wirewound resistors and film resistors
- AEC-Q200 Tested

leaded resistors

dimensions and construction



Type	Dimensions inches (mm) L	C (max.)	D	d (nom.)	l*
PCF1/2	.354±.039 (9.0±1.0)	.437 (11.1)	.138±.02 (3.5±0.5)	.028 (0.7)	1.18±.118 (30.0±3.0)
PCF1	0.65±.039 (16.5±1.0)	.748 (19.0)	.217±.039 (5.5±1.0)	.031 (0.8)	1.50±.118 (38.0±3.0)
PCF2	.748±.039 (19.0±1.0)	.886 (22.5)	.276±.039 (7.0±1.0)		

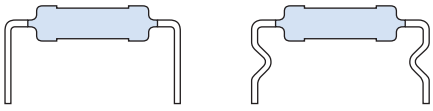
* Lead length changes depending on taping type

ordering information

PCF	1	C	T631	R	103	K
Type	Power Rating	Termination Material	Taping	Packaging	Nominal Resistance	Tolerance
PCF	1/2: 0.5W 1: 1W 2: 2W	C: SnCu	1/2: T52 1: T631 2: T631	R: Reel	2 significant figures + 1 multiplier	K: ±10% M: ±20%

taping

Type	Axial Taping T52	T631
PCF1/2	○	–
PCF1	–	○
PCF2	–	○



Contact us for lead forming details.

For further information on packaging, please refer to Appendix C.

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

11/01/23

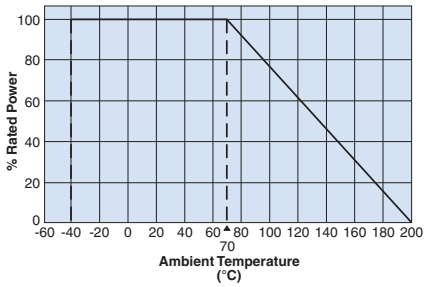
applications and ratings

Part Designation	Power Rating @ 70°C	Resistance Range (Ω) K: ±10% E-12	Resistance Range (Ω) M: ±20% E-6	T.C.R. (x10^{-6}/K)	Maximum Working Voltage	Maximum Overload Voltage	Dielectric Withstanding Voltage	Rated Ambient Temp.	Operating Temp. Range
PCF1/2	0.5W	4.7 - 100K	4.7 - 100K	-500 ~ -1300: 3.3Ω≤R<10Ω -600 ~ -1500: 10Ω≤R<100Ω	200V	400V	500V	+70°C	-40°C to +200°C
PCF1	1.0W	3.3 - 390K	3.3 - 330K	-700 ~ -1800: 100Ω≤R<1kΩ -900 ~ -1900: 1kΩ≤R<100kΩ	300V	600V			
PCF2	2.0W			-900 ~ -2000: 100kΩ≤R<200kΩ -900 ~ -2200: 200kΩ≤R≤390kΩ	400V	800V	700V		

Rated Voltage = $\sqrt{\text{Power Rating x Resistance Value}}$ or Maximum Working Voltage, whichever is lower.

environmental applications

Derating Curve

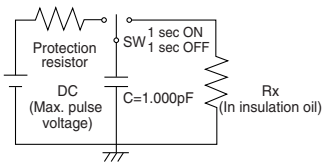


For resistors operated at an ambient temperature of 70°C or above, a power rating shall be derated in accordance with the derating curve.

Performance Characteristics

Parameter	Requirement Δ R ±(% + 0.05Ω) Limit	Requirement Δ R ±(% + 0.05Ω) Typical	Test Method
Resistance	Within regulated to tolerance	—	Resistance: Measurement voltage 3.3Ω=<R<10Ω: 0.3V 10Ω=<R<100Ω: 1.0V 100Ω=<R=<390kΩ: 3.0V 25°C
T.C.R	-500~-1300:3.3Ω≤R<10Ω -600~-1500:10Ω≤R<100Ω -700~-1800:100Ω≤R<1kΩ -900~-1900:1kΩ≤R<100kΩ -900~-2000:100kΩ≤R<200kΩ -900~-2200:200kΩ≤R≤390kΩ	—	+25°C/-40°C, +25°C/+75°C and +25°C/+125°C
Voltage Coefficient (Apply for over 1kΩ)	0~-0.2%/V	—	Rated voltage and rated voltage x 10%
Overload	2%	0.4%	Rated voltage x 2.5 or maximum overload voltage for 5s, whichever less
Resistance to pulse	Refer to the table on the right	—	The resistor mounted to the test circuit as below is applied with high voltage impulse 10,000 cycles.
Resistance to soldering heat	2%	0.8%	350°C±10°C, 3.5s±0.5s
Rapid change of temperature	2%	0.4%	-40°C (30 min.)/+85°C (30 min.), 5 cycles
Moisture resistance	5%	0.6%	40°C±2°C, 90%~95%RH, 1000 hours, 1.5h ON/0, 5h OFF cycles
Load life	5%	0.4%	70°C±2°C, 1000h, 1.5h ON/0, 5h OFF cycles
Resistance to Solvent	No abnormality in appearance. Marking shall be easily legible.	—	Dipping in IPA or Xylene for 3 minutes and leaving for 10 minutes after removing drops, then brushing 10 times.

Type	Test Voltage	Performance Requirements Δ R ±(% + 0.05Ω)
PCF1/2	10kV:4.7Ω≤R<10kΩ	5
	10kV:10kΩ≤R<33kΩ	10
	10kV:33kΩ≤R<100kΩ	25
	4kV:10kΩ≤R<100kΩ	5
PCF1	14kV:3.3Ω≤R<30kΩ	5
	14kV:30kΩ≤R<390kΩ	10
	7kV:30kΩ≤R<390kΩ	5
PCF2	20kV:3.3Ω≤R<10kΩ	5
	20kV:10kΩ≤R<390kΩ	10
	11kV:10kΩ≤R<390kΩ	5



Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

KOA:

RK73H1JTTD3741F RK73H2ATTD6491F RK73H1JTTD1622F RK73H2ATTD7501F RS73F2ATTD2000B
MOSX1CT528RR10J RK73B1ETTP333J RK73H1ETTP1431F RK73H1JTTD1182F RK73H2BTTD5R60F
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