

Anti-Surge Resistors

Thick-Film Power Resistors Handles Large Surges

► Preview

A new range of Antisurge axial leaded power resistors, metal glaze resistive element on ceramic substrates, from Token Electronics.

A carbon film resistor replacement, the new RCR series thick-film style resistors offer numerous benefits over the previous style devices, namely reduced costs, excellent thermal compliance, optimised a variety of surge capabilities and better solder joint reliability against temperature cycles.

Token succeeded in commercialising the compact thick-film type leaded resistors with high power and high antisurge characteristics, meeting latest design engineer requirements and making the parts suitable for industrial, measurement and telecommunication applications as well as for automotive circuits, like Electrical Control Units (ECU) and Air-Bag Systems.

The antisurge characteristics of Token's latest metal glaze power film style resistors are superior to standard metal film resistors. The power film types of RCR resistors are available: 0.25W to 10W power rating, max working voltage up to 3000V and max overload voltage 5000V. The resistance range is $1\Omega \sim 100M\Omega$ at operating temperature range $-20^{\circ}\text{C} \sim +155^{\circ}\text{C}$.

All RCR series devices are RoHS-compliant, and compatible with high temperature soldering processes normally employed for lead free solders. Resistors are also available in various forming styles and different leads for different applications. Contact us with your specific needs information.



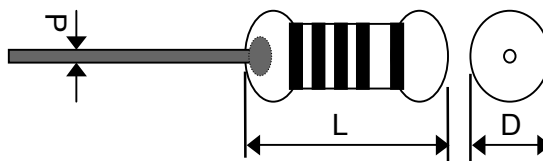
► Applications

- Ballasts
- Amplifiers
- Industrial power supplies
- Telecommunications
- Household appliances
- Automotive circuits, Computer, Instrumentation

► Features

- High power at small sizes
- Max working voltage up to 3000V
- Lead (Pb)-free and RoHS compliant
- Operating temperature range: $-20^{\circ}\text{C} \sim +155^{\circ}\text{C}$
- Metal glaze power film, axial leaded type
- Max overload voltage 5000V, Tolerances: J ($\pm 5\%$)

Specifications & Dimensions (Unit: mm)

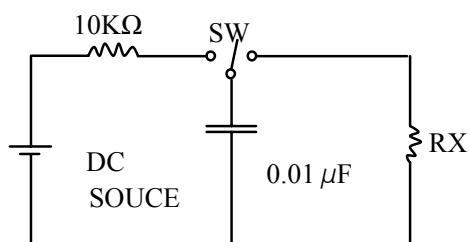


Type	Power Rating	L	D	d ± 0.05	H
RCR25	1/4W	6.5±1	2.3±0.5	0.5 ~ 0.6	26±3
RCR50	1/2W	9.5±1	3.4±0.5		
RCR100	1W	12.0±1	4.0±0.5	0.7 ~ 0.8	
RCR200	2W	16.0±1	6.1±0.5		
RCR300	3W	17.0±1	7.0±0.5		
RCR500	5W	24.0±1	8.0±0.5		
RCR1000	10W	max.50	max.10		

Power Rating

Type	Power Rating	Max Working Voltage	Max Overload Voltage	Dielectric With-standing Voltage	TCP. (ppm/°C)	Resistance Range E24. J(±5%)(Ω)	Operating Temp.range
RCR25	1/4W	500V	700V	500V	±350	1 ~ 33M	-20°C~+155°C
RCR50	1/2W	1000V	1500V	600V	±350	1 ~ 68M	
RCR100	1W	1500V	2500V	800V	±350	1 ~ 100M	
RCR200	2W	2000V	3000V	800V	±350	1 ~ 100M	
RCR300	3W	2500V	4000V	1000V	±350	1 ~ 100M	
RCR500	5W	3000V	5000V	1000V	±350	1 ~ 100M	

Power Rating



Test Circuit

Power	Resistance Range (Ω)	Surge Voltage	Anti-Surge Characteristics	Surge Test Condition
0.25 W	50K < R	3KV	(2.5 Sec. ON + 2.5 Sec. Off) × 10 Cycles ΔR ≤ ±(50%R+0.1Ω)	In accordance with IEC65 Safety specification.
0.5 W	10K ≤ R < 100K	3KV		
	100K ≤ R < 360K	5KV		
	360K ≤ R < 1M	7KV		
	1M ≤ R	10KV		

How to Order

RCR50

❶

1/2W

❷

220KR

❸

J

❹

TB

❺

❶ Part Number: RCR

❷ Rated Power (W)

❸ Resistance Value (Ω)

Code	Resistance Value (Ω)
1R0	1.0 Ω
100R	100 Ω
220K	220K Ω
22M	22M Ω

❹ Resistance Tolerance (%)

Code	Resistance Tolerance
J	$\pm 5\%$

❺ Package

Code	Package
P	Bulk
TB	Taping Box

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