

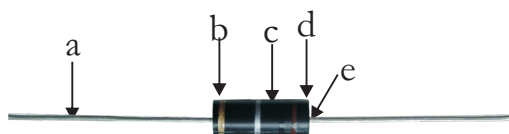
● Features

- I High pulse withstanding and high energy capability
- II Low inductance
- III Solid rod carbon composition
- IV Products with Pb-free Terminations and RoHS compliant

● Applications

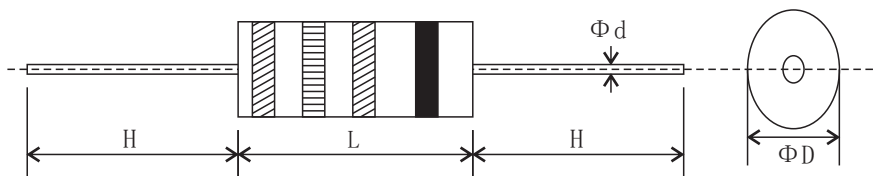
- I high voltage power supplies
- II high power lighting
- III inrush current limiting, protection (e.g. Discharge circuits, Surge protection)
- IV strobe lighting
- V medical defibrillators ,welding, automotive

● Construction



a	Lead wire
b	Color band
c	Material
d	Insulation coating
e	End cap

● Dimensions



Type	L(mm)	ΦD(mm)	H(mm)	Φd(mm)
1/4W	6.3 ± 1	2.4 ± 0.2	27 ± 2	0.60 ± 0.05
1/2W	10 ± ^{0.5} _{1.5}	3.6 ± 0.2	27 ± 2	0.70 ± 0.05
1W	15 ± ^{0.5} _{1.5}	5.5 ± 0.5	28 ± 1	0.80 ± 0.05
2W	18 ± ^{0.5} _{1.5}	8.0 ± 0.5	27 ± 1	1.00 ± 0.05

● Applications And Ratings

Description	CCR-1/4W	CCR-1/2W	CCR-1W	CCR-2W
Rated power	1/4W	1/2W	1W	2W
Rated voltage	Rated power resistance (D.Cor A.C effective value of the voltage)			
Maximum voltage	400V	700V	1000V	1000V
Maximum overload voltage	250V	350V	500V	500V
Nominal resistance	E24,E12,E6	E24,E12,E6	E24,E12,E6	E24,E12,E6
Tolerance	J,K,M	J,K,M	J,K,M	J,K,M
Resistance range	2.2Ω—12MΩ	2.2Ω—22MΩ	2.2Ω—22MΩ	2.2Ω—22MΩ
Operating temperature range	-55—125℃	-55—125℃	-55—125℃	-55—125℃

● Ordering Information

Example:

CCR	01B	J	100K0
(1)	(2)	(3)	(4)
Series Name	Power Rating	Resistance Tolerance	Resistance

(1)Type: CCR SERIES

(2)Power Rating: 012=1/2W,01B=1W,02B=2W

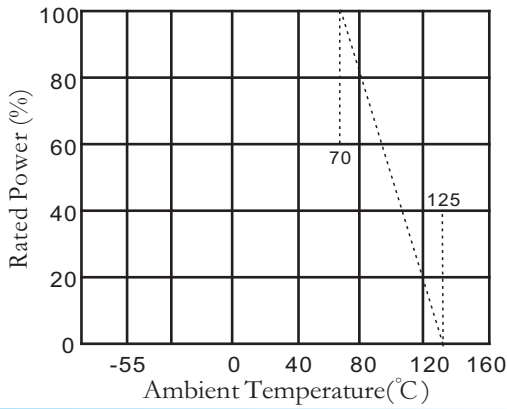
(3)Tolerance:F=±1%,G=±2%,J=±5%,K=±10%

(4)Resistance Value:1K0=1KΩ,100K0=100KΩ

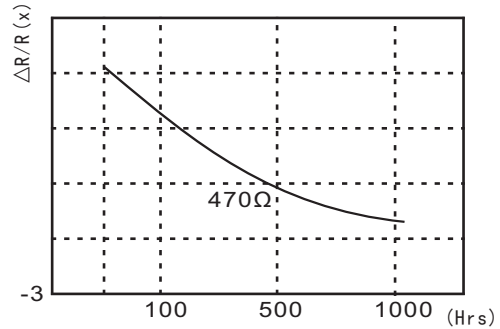
Reference Standards

JISC 5201-1

Derating Curve



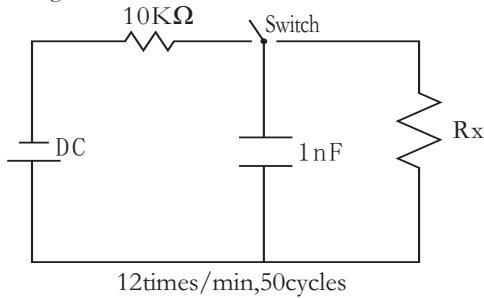
70°C Load Life



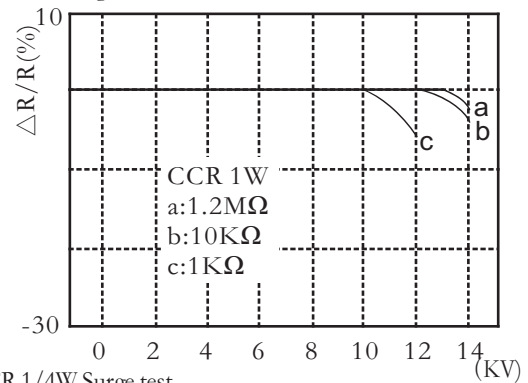
The derated values of dissipation for temperatures in excess of 70°C shall be indicated by the following Curve.

Performance Outline

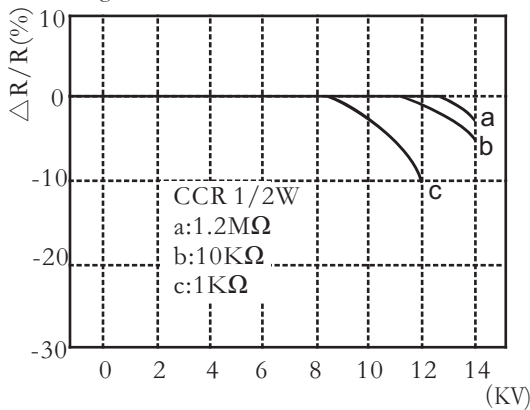
CCR Surge test method



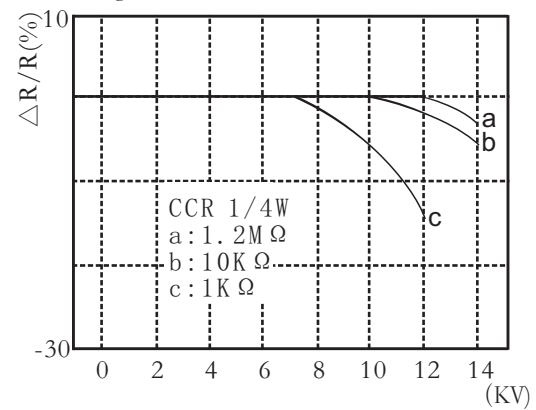
CCR 1W Surge test



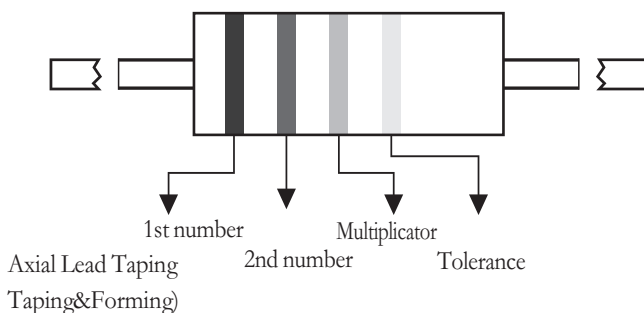
CCR 1/2W Surge test



CCR 1/4W Surge test



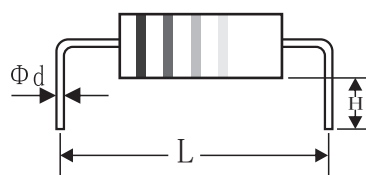
Color For Each Numeral



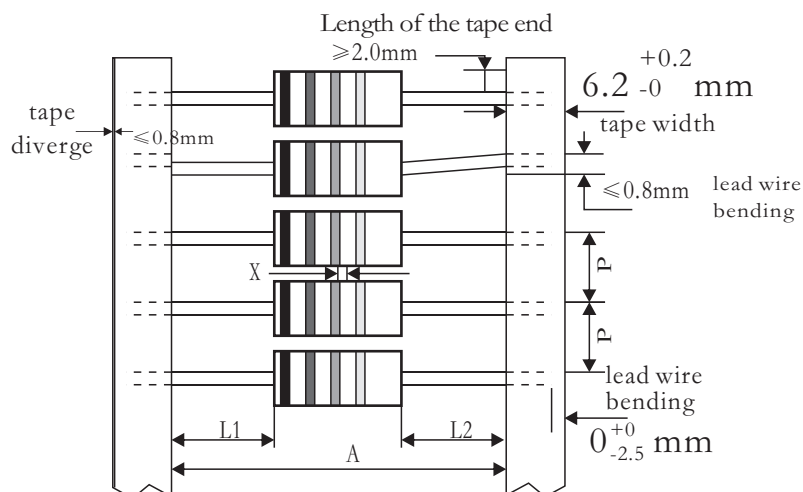
● Performance

Description		Performance Requirements		Test Method	
Resistance Temperature Coefficient	Resistance Range	Maximum Resistance Value Range(%)		Test temperature +20°C / -55°C / +20°C / +100°C / +20°C	
		≤1KΩ	-55~20°C		20~100°C
		1.1KΩ~10K	±6.5		±6.5
		11KΩ~100KΩ	±10		±8.0
		110KΩ~1MΩ	±13		±10.0
		1.1MΩ~10MΩ	±15		±13.0
	≥11MΩ	±20	±19.5		
	≥11MΩ	±25	±20		
Voltage coefficient		±0.035%/V		Use 10% and 100% rated voltage or maximum voltage (the lower) to test resistance value	
Short-time overload		ΔR≤2.5R% No visible damage ,markings legible		2.5 times rated voltage or maximum overload voltage (the lower) 5 seconds	
Insulation resistance		≥1000MΩ		testing voltage 500V 1 minute	
Withstand voltage		(No flasheover or breakdown		2 times maximum voltage 1 minute	
Terminal strength	Pulled	ΔR≤±2%R No visible damage		d 0.6mm: load 10N 10S ,≥0.8mm: load 20N 10S	
	Winded			d 0.6mm: load 10N 90° ,≥0.8mm: load 20N 10S	
	Twisted			3600 in opposite direction	
Resistance to vibration		ΔR≤±2%R , No visible damage		3 direction 2 hours each	
Solder-heat resistance		ΔR≤±5%R Marks legible , no visible damage		4mm from the body , 3 seconds	
Solderbility		At least 95% of the dipping surface must be covered by new solder , no flaws gathered		2mm from the body , 2seconds	
Humidity		ΔR≤±2%R ,No visible damage		-55/85°C for 5 cycles	
Temperature cycle		ΔR≤±10%R , No visible damage		40°C 95%RH 240 hours	
70°C load life		ΔR≤±10%R No visible damage, marks legible		rated voltage or maximum voltage , 1.5 hours ON,0.5 hours off, 79	

● Horizontal Forming



Dimension(mm)		
L±0.1	H±0.1	Φd±0.02
15.0	5.0	0.7



Specification	T-52
W	52±1
A	64.5±0.5
P	5.08±0.38
50P	254±2
/L1-L2/	≤1.0
X	≤0.5
unit : mm	