

Sulfurization-proof Chip Resistor

Hokuriku Electric Industry Co.,Ltd



【Model Number】
CRS**

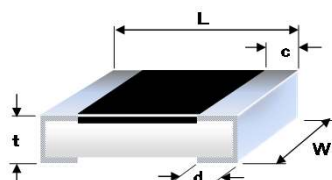
【Features】

- Use of special protective material provides excellent sulfurization characteristic.
- Miniature size or Network types are also available.
- Reflow, Flow solderings are applicable.
- Due to metal-glazed thick film material utilized, it has excellent heat resistance, weatherability.
- Europe RoHS compliant product.



【Dimensions】

(Unit: mm)



Model No.	L	W	t	c	d
CRS10	1.00±0.05	0.50±0.05	0.35±0.05	0.30±0.10	0.25±0.10
CRS16	1.60±0.15	0.80 +0.20/-0.10	0.50 +0.15/-0.05	0.40±0.20	0.25±0.20
CRS20	2.00 +0.20/-0.10	1.25 +0.20/-0.10	0.50 +0.15/-0.05	0.45±0.20	0.40±0.20
CRS32	3.20 +0.10/-0.15	1.60 +0.10/-0.15	0.55 +0.15/-0.05	0.65±0.20	0.50±0.20
CRS35	3.20 +0.10/-0.15	2.60 +0.10/-0.15	0.55 +0.15/-0.05	0.60±0.20	0.50±0.20
CRS50	5.00±0.15	2.50±0.15	0.56±0.15	0.70±0.25	0.60±0.20

【Designation】

CRS16 - 103 J V

① Model No. ② Resistance Value ③ Resistance Tolerance ④ Packing Form

Model No.	Size
CRS10	1005
CRS16	1608
CRS20	2012
CRS32	3216
CRS35	3225
CRS50	5025

Marking	Resistance
103	10KΩ
103 = 10×10^3 = 10,000Ω = 10KΩ	

Symbol	Tolerance
F	±1.0%
G	±2.0%
J	±5.0%

Symbol	Form
V	Paper tape
E	Emboss tape
B	Bulk

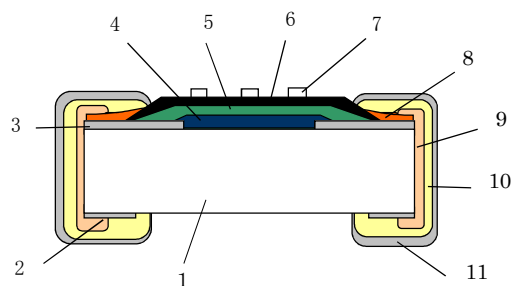
【Specification】

Model No.	Rated power (W)	Tolerance	Range (Ω)	TCR (ppm/°C)	Max.Working Voltage	Max.Overload Voltage
CRS10	0.063	Class F (±1%) Class G (±2%) Class J (±5%)	10~1M	±250	50V	100V
CRS16	0.100				150V	200V
CRS20	0.125				200V	400V
CRS32	0.250					
CRS35	0.250					
CRS50	0.500					

* Operating temperature range: -55~+155 °C

【Structure】

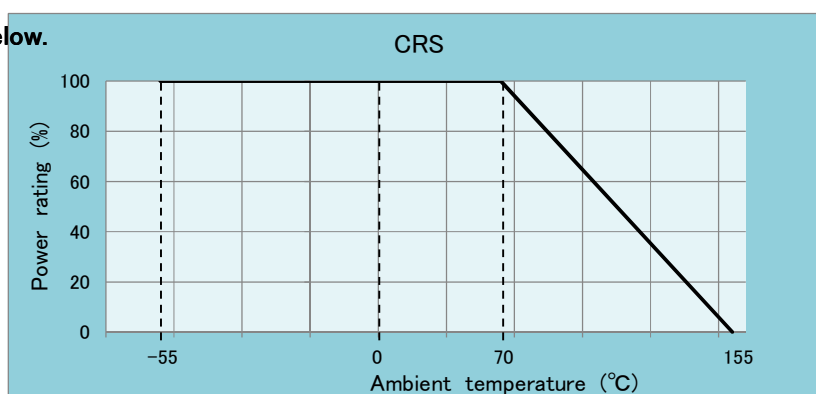
Model No.	CRS16 CRS10	CRS50, CRS35, CRS32, CRS20
No.	Element Name	
1	Ceramic substrate	
2	Bottom electrode	
3	Top electrode	
4	Resistive element	
5	Protective coat I	
6	Protective coat II	
7	Without Marking	With Marking
8	Protective coat III	
9	Side electrode	
10	Ni plating	
11	Sn plating	



* Design*specification are subject to change without prior notice. Please check before purchase and use.

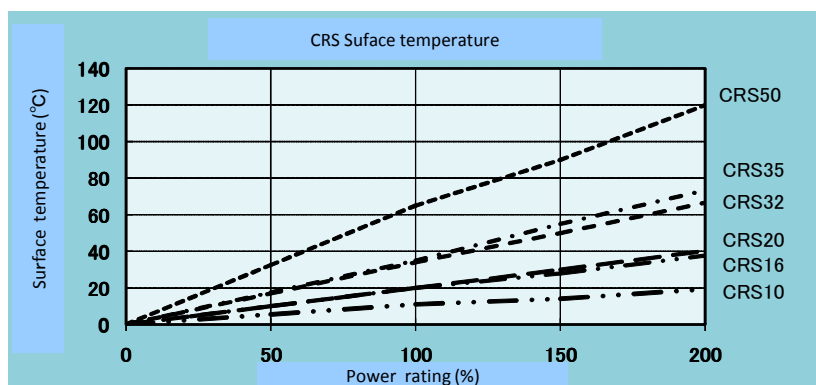
【Power derating curve】

■ When used at ambient temperature of 70°C or above, power rating must be derated in accordance with the derating curve. below.



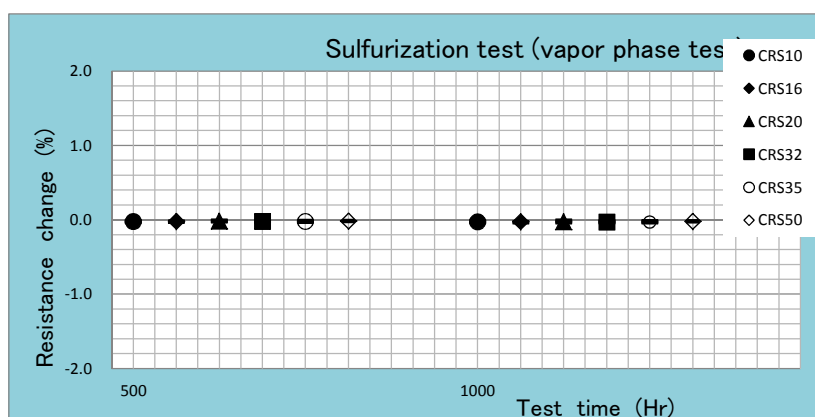
【Surface temperature rise】

■ As for relation between rated power ratio and surface temperature rise, refer to the



【Anti-sulfuration characteristic】

■ In test chamber of 40°C, 90~95%RH, H₂S:3ppm, 1000Hr storage without load.



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