

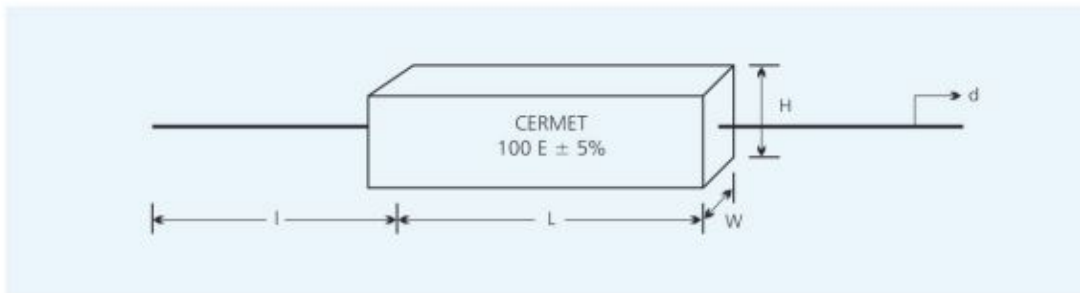
# WIRE WOUND RESISTORS (CCA Series)



CERMET RESISTRONICS PVT. LTD

WIRE WOUND RESISTORS

- High Grade Ni-Cr Wire Wound Element on Ceramic Core
- Encased in Ceramic & sealed with Flame proof Silicon Cement
- Super Heat dissipation & Lower Temp. Co-efficient
- Flame Proof & Non Combustibles
- High Surge withstanding capability
- High Ohmic Values with MOR Element
- Standard tolerance 1%, 2% & 5% Available

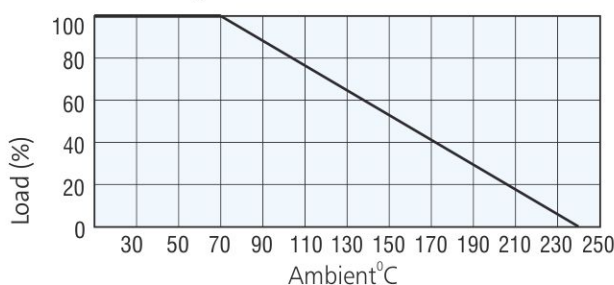


Dimensions (in mm)								
Type	Watt	L ±1.0	W ±1.0	H ±1.0	I ±2.0	D ±0.05	Max Working Voltage (Dc / Rms)	Resistance Range
CCA -2	2.0	18.0	7.0	7.0	21	0.50	150 Dc/rms	0.1 E- 120 E
CCA -3	3.0	20.0	8.0	8.0	26	0.66	350 Dc/rms	0.1 E- 150 E
CCA -5	5.0	22.0	9.50	9.50	26	0.66	350 Dc/ rms	0.1 E -200 E
CCA -7	7.0	35.0	9.50	9.0	36	0.78	500 Dc/rms	0.1 E- 500 E
CCA -10	10.0	48.0	9.50	9.0	29	0.78	750 Dc/ rms	0.1 E-30 K
CCA -15	15.0	48.0	12.50	12.0	34	0.78	1000 Dc/ rms	0.5 E-30 K
CCA -20	20.0	62.0	14.0	13.50	33	0.78	1000 Dc / rms	0.5 E-30 K

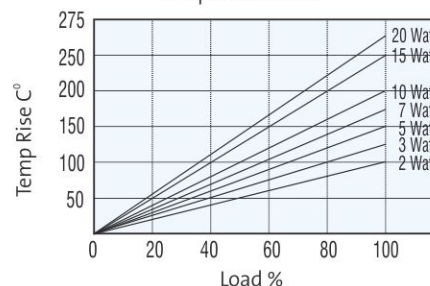
\* (Rated continuous Working Voltage):  $\sqrt{P \times R}$  or Maximum Working Voltage which ever is low.

\*\* Maximum Overload Voltage : Short Time Overload Voltage.

Power Derating Curve



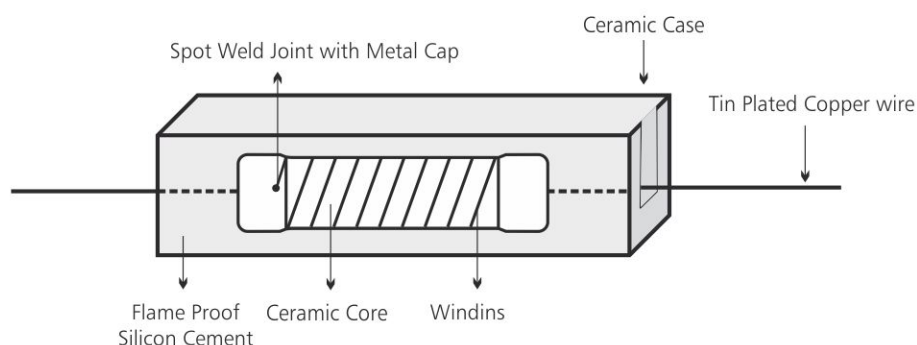
Temperature Rise



Note: Customised variations available on request.

Characteristics	Test Methods	Limits
D C Resistance	Resistors are tested with standard specified voltages for its Ohmic values to check the specified tolerance.	The Resistors shall be within specified tolerance limits.
Short Time Overload	The Resistors shall be subjected to 3 times the Rated Wattage for a duration of 5 secs.	$\Delta R \% = \pm 3.0\%$ (+ 0.05 $\Omega$ )
Temp-Coefficient	The Resistors value shall be checked at 2 temp. i.e. one At Ambient & the final at Amb + 100° C. The TCR is then Calculated as : $\frac{R_2 - R_1}{R_1} \times \frac{1}{t_2 - t_1} \times 10^6 = \text{ppm}/^\circ\text{C}$	PPM
		300 PPM  Lower ppm on request
Rated Load	A Rated Continuous Working Voltage or Maximum Wkg. Voltage whichever less shall be applied to the resistors for a duration of 2 Hrs.	$\Delta R \% = \pm 2 \% \text{ Max}$
Solderability	A solder bath is maintained at 230°C. The specimen leads are immersed in the bath & withdrawn within 3 secs. A suitable flux is used during the test.	A fresh solder shall cover the specimen leads by Min. 95% coverage.
Resistance to Solder Heat	A solder bath is Maintained at 350°C. The specimen leads are Subjected to the bath for a duration of 10 secs.	$\Delta R \% = \pm 1 \% \text{ Max}$
Resistance to Solvents	The specimen shall be subjected to IPA for a duration of 1 min. 10 strokes of hard brush shall be applied. The test shall be conducted 3 times.	The marking shall remain legible.
Incombustibility	The resistors shall be subjected to 6 times the rated wattage for a duration of 5 min.	The resistors shall not catch flame.
Terminal Strength	Pull Test: The resistor leads shall be pulled using 5 N force Bend Test: The resistor leads are bend through 180° three times.	There shall be no damage.
Load Life	The specimen shall be subjected to an ambient of 70°C for a duration of 1000 Hrs. The specimen shall also be loaded for full power dissipation. The duty cycle shall be 1½ Hr. On & ½ Hr. Off.	$\Delta R \% = \pm 5 \% \text{ Max}$
Steady State Humidity	The shall be subjected to an amb. of 40°C with RH as 95%, for a duration of 56 days. A small DC voltage shall be so applied that the specimen shall dissipate 1% of the rated power.	$\Delta R \% = \pm 5 \% \text{ Max}$

### Construction



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