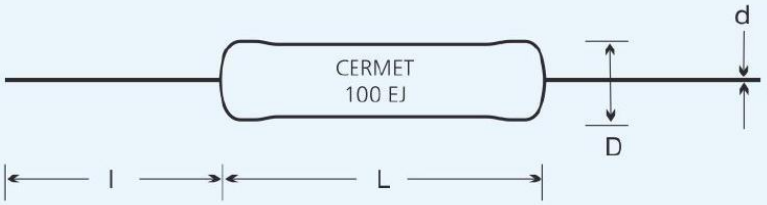
WIRE WOUND RESISTORS
(CSIA/CMSIA/CSMSIA Series)

CERMET RESISTRONICS PVT.LTD

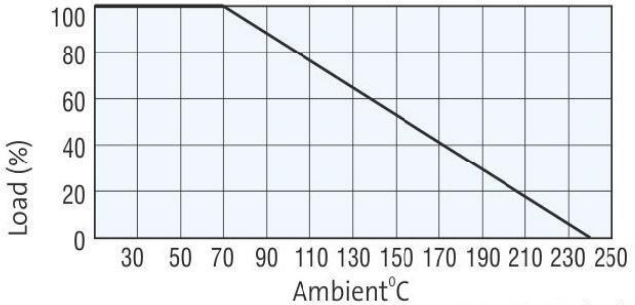
- High Grade Ni-Cr Wire Wound element on ceramic Core
- Coated with Heat Insulating Flame Proof Coating.
- High surge withstanding, Suitable for Energy Meters
- Low Temp-Coefficient, High stability.
- Color coded or Printed for easy identification.
- Aryton-Perry winding ensures low inductance.
- Standard tolerance 1%, 2%, 5% available.
- Conforming to JSS 50402.



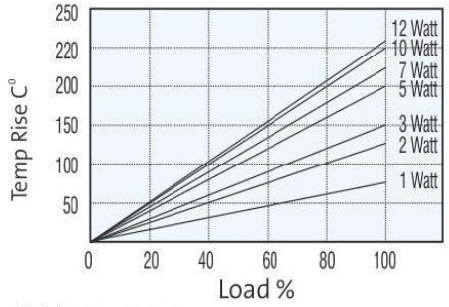
Type	Watt	L ±1.00	D ±0.50	d ±0.02	l ±2.0	Resistance Range
CSIA 0.5	0.50	9.00	3.50	0.50	26	0.1 E - 100 E
CSIA 1	1.0	12.00	4.50	0.66	32	0.1 E – 150 E
CSIA 2	2.0	16.00	5.50	0.66	30	0.1 E – 200 E
CSIA 3	3.0	16.00	5.50	0.66	30	0.1 E – 400 E
CSIA 4	4.0	18.00	6.50	0.78	38	0.1 E – 1 K
CSIA 5	5.0	21.00	7.50	0.78	38	0.1 E – 1 K
CSIA 7	7.0	25.00	8.50	0.78	38	0.1 E – 3 K
CSIA 8	8.0	32.00	8.50	0.78	38	0.1 E – 5 K
CSIA 10	10.0	42.00	8.50	0.78	38	0.1 E – 10 K
CSIA 12	12.0	53.00	8.50	0.78	38	0.1 E – 10 K
CMSIA 1	1.0	9.0	3.50	0.50	26	0.1 E – 400 E
CMSIA 2	2.0	12.0	4.50	0.66	30	0.1 E – 400 E
CMSIA 3/4	4.0	16.00	5.50	0.66	30	0.1 E – 1 K
CMSIA 5	5.0	18.00	6.50	0.78	38	0.1 E – 1 K
CSMSIA 2	2.0	9.0	3.5	0.50	26	0.1 E – 400 E
CSMSIA 3	3.0	12.0	4.50	0.66	32	0.1 E – 400 E
CSMSIA 4	4.0	16.00	5.50	0.66	30	0.1 E – 400 E

- Non Inductive Type Wire Wound Resistors available on request.
- Higher Ohmic Values are made as per customer Requirement.
- Miniature & Ultra –miniature are specially developed & available on request.
- Color code/Printing available on request.

Power Derating Curve

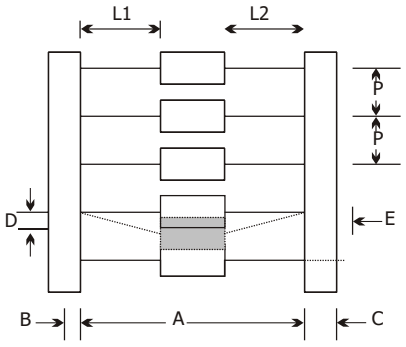


Temperature Rise



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 2.5 times the Rated Voltage or Max overload voltage (Whichever is low) For duration of 5 secs.	ΔR%= ± 3.0% (+ 0.05 Ω)
Temp-Coefficient	The Resistors value shall be checked at 2 temps. i.e. one at Ambient & the final at Amb. + 100 0 C. The TCR is then Calculated as: $\frac{R2-R1}{R1} x \frac{1}{t2-t1} x 10^6$ =ppm/°C	200 PPM/°C (Lower ppm on request)
Rated Load	A Rated Continuous Working Voltage or Maximum Working Voltage whichever less shall be applied to the resistors for a duration of 2 Hrs.	Δ R % = ± 2 % Max
Solderability	A Solder bath is maintained at 230°c. The specimen leads are immersed in bath & withdrawn within 3 sec. A suitable Flux is used during this 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 bath for duration of 10 sec.	Δ R % = ± 1 % Max
Resistance to solvents	The specimen shall be subjected to IPA for duration of 1 min. 10 Strokes of hard brush shall be applied. The test shall be conducted 3 times.	The color code marking shall remain legible.
Dielectric strength	A foil is wrapped around the specimen body. A voltage of 300V @0.5 ma shall be applied between both the terminals of the specimen for a duration of 1 min.	There shall be no flash over or break down.
Terminal Strength	Pull Test: The Resistor Leads shall be pulled using 5N Force. Bend Test: The resistors leads are bend through 180° three times	No evidence of mechanical damage.
Load Life	The specimen shall be subjected to an ambient of 70°c for 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.	Δ R % = ± 5 % Max
Surge immunity Test	6 KV Surge & 10 KV Impulse	Δ R % = ± 2 % Max



Taping Details:

Type	A±1.0	B±1.0	C±0.5	D	E	P±0.3	L1-L2
CSIA 05	52	4	6	1 MAX	0.00	5	1 MAX
CSIA 1	52	4	6	1 MAX	0.00	5	1 MAX
CSIA 2	63	4	6	1 MAX	0.00	5	1 MAX
CSIA 3	63	4	6	1 MAX	0.00	5	1 MAX
CMSIA 1	52	4	6	1 MAX	0.00	5	1 MAX
CMSIA 2	52	4	6	1 MAX	0.00	5	1 MAX
CMSIA 3/4	63	4	6	1 MAX	0.00	5	1 MAX
CSMSIA 2	63	4	6	1 MAX	0.00	5	1 MAX
CSMSIA 3	63	4	6	1 MAX	0.00	5	1 MAX
CSMSIA 4	63	4	6	1 MAX	0.00	5	1 MAX

CERMET RESISTRONICS PVT. LTD
Gate No. 61, Plot No. 1 & 2, Tal. Bhor, Shindewadi, Pune- 412205, Maharashtra, India
Contact No. :- +91 9921050098 / 9975596459 / 9975596456
E-mail: - sales@cermet.co.in
Website :- www.resistorcermet.com