

CHP-Series

Power Chip Resistors on Aluminium-Nitride Substrates (AlN)

Sizes: 1216, 2010, 2040, 2512, 4020

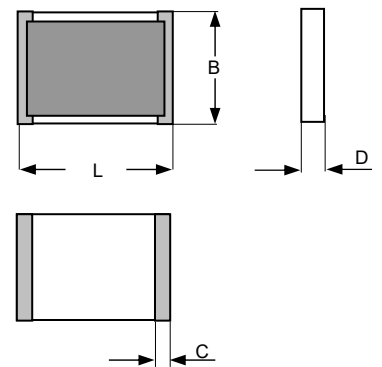
Features:

- Chip Resistors in thick film technology
- High thermal conductivity
- High temperature applicability up to 200°C
- PtAg⁰⁾ terminations for soldering or conductive glueing
- Untrimmed for improved pulse power rating (NA)
- Suitable for high vacuum applications – no organics



Dimensions:

Size		L (mm)	B (mm)	D (mm)	C (mm)
Imperial (Standard)	Metric (ref. only)	length	width	thickness	width of wrap around
1216	3240	3.2 $+0.2/-0.05$	4.0 $+0.2/-0.05$	0.5 $+0.2/-0.1$	0.8 ± 0.2
2010	5025	5.1 $+0.2/-0.05$	2.5 $+0.2/-0.05$	0.6 $+0.2/-0.1$	0.9 ± 0.2
2040	50100	5.1 $+0.2/-0.05$	10.2 $+0.2/-0.05$	0.6 $+0.2/-0.1$	1.2 ± 0.2
2512	6332	6.3 $+0.2/-0.05$	3.5 $+0.2/-0.05$	0.6 $+0.2/-0.1$	0.9 ± 0.2
4020	10050	10.2 $+0.2/-0.05$	5.1 $+0.2/-0.05$	0.6 $+0.2/-0.1$	0.9 ± 0.2



Packaging:

Bulk in plastic bags – minimum quantity 100 pieces per value
 Blister tape acc. to IEC 60286-3 – minimum 1000 pieces per value
 Reel diameter 180 mm or 330 mm

Ordering Data:

Type – value – tolerance – packaging
 Example: CHP 2512 100R $\pm 5\%$ Tape 180 mm

Untrimmed parts are indicated by the extension "NA" in the order code:

Type – value – tolerance – NA - packaging
 Example: CHP 1216 100 R $\pm 10\%$ NA Tape 180 mm

If no requirements for TCR and taping are given, the standard value (highest value in table) will be supplied and packaging is bulk.

⁰⁾ PtAg: Platinum-Silver thick film

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Technical data – depending on size:

Size	1216	2010	2040	2512	4020
Power rating P_{70} (W) ¹⁾ ($P_{200} = 0$ W)	0,75	1,0	2,5	1,5	2,0
Max. working voltage (V) ²⁾ Standard (trimmed) NA (untrimmed, Tol. $\geq 5\%$)	200 600	250 900	250 900	300 1200	500 1500

Ranges / Tolerances / TCR ³⁾					
1R – < 10R	TCR 250 1/.../20%	TCR 250 1/.../20%	TCR 250 1/.../20%	TCR 250 1/.../20%	TCR 250 1/.../20%
10R – 1k6	TCR 100 1/.../20%	TCR 100 1/.../20%	TCR 100 1/.../20%	TCR 100 1/.../20%	TCR 100 1/.../20%

¹⁾ At continuous power dissipation the dimensions of solder-pads have to secure sufficient heat-conduction.

²⁾ Continuous operating voltage (U_{-} , U_{eff}): $V \leq \sqrt{P \cdot R}$ or max. working voltage (the lower value)

³⁾ TCR: temperature range + 25°C...+ 125°C

Technical data – general:

Operating temperature range	-55°C ... +200°C
Climatic category acc. to EN 60068-1	55/200/56
Solderability acc. EN 60068-2-58 (lead free and lead containing) ⁴⁾	250°C 3s
Max. soldering temperature acc. EN 60068-2-58	260°C 10s
Moisture Sensitivity Level acc. to J-STD-020	MSL 1 (unlimited)

Long term stability	10R – 100M	<10R
Storage 125°C/1000h	< 0.5%	< 1%
Storage 200°C/1000h	< 1%	< 2%
Load P_{70} /70°C/1000h	< 1%	< 2%
Short term overload (2,5 fach/ 5s)	< 0.5%	< 1%
Damp heat (1000h/85°C/85%)	< 1%	< 2%

⁴⁾ Up to 6 months after shipment (air, 30°C/60%rH) or up to 12 months at storage in Nitrogen or in evacuated dry packs.

Other data according to EN 140401-802 (CECC 40401-802).