Resistor Technology

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
- PtAg [0)] terminations for soldering or conductive glueing
- Untrimmed for improved pulse power rating (NA)
- Suitable for high vacuum applications – no organics

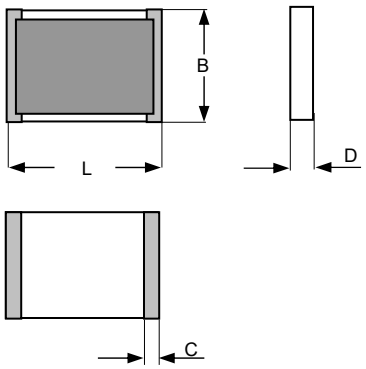
RoHS / ELV conform 2011/65/EC 2000/53/EC

e4

Non-Magnetic

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
Blistertape 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 ±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 ±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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CHP-Series
Power Chip Resistors on Aluminium-Nitride Substrates (AIN)
Sizes: 1216, 2010, 2040, 2512, 4020

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. ≥ 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}): $V \leq \sqrt{(P*R)}$ 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).

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