

## Precision High Value Chip Resistors

Type: CHM, CRM

Sizes: 0805, 1206, 1210, 2010, 2512, 4020

### Features:

- Meander structured High Value Chip Resistors in Thickfilm
- Low temperature and voltage dependency
- High Working Voltage up to 3000 V
- Suitable for high vacuum applications – no organics
- High temperature application up to 300°C possible (CHM-HT)
- Non-magnetic (CHM only)

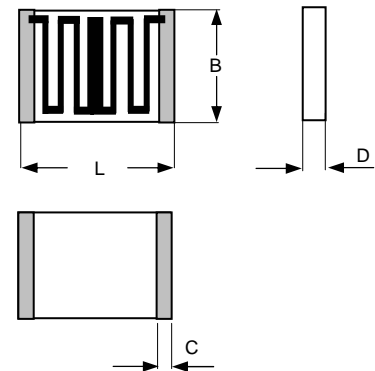


### Contact areas:

- CHM: PtAg for conductive glueing and soldering (non-magnetic, high temp. appl.)
- CRM: Nickel-barrier / matte tin

### Dimensions:

Size	L	B	D	C
0805	2.00 <sup>+0.15/-0.05</sup>	1.25 <sup>+0.15/-0.05</sup>	0.40 <sup>+0.15/-0.05</sup>	0.3 <sup>+0.2/-0.1</sup>
1206	3.20 <sup>+0.15/-0.05</sup>	1.50 <sup>+0.2/-0.05</sup>	0.40 <sup>+0.15/-0.05</sup>	0.3 <sup>+0.2/-0.1</sup>
1210	3.20 <sup>+0.15/-0.05</sup>	2.50 <sup>+0.2/-0.05</sup>	0.50 <sup>+0.15/-0.05</sup>	0.8 <sup>±0.2</sup>
2010	5.10 <sup>+0.15/-0.05</sup>	2.50 <sup>+0.2/-0.05</sup>	0.60 <sup>+0.20/-0.1</sup>	1.2 <sup>±0.2</sup>
2512	6.30 <sup>+0.15/-0.05</sup>	3.50 <sup>+0.2/-0.05</sup>	0.60 <sup>+0.15/-0.05</sup>	0.9 <sup>±0.2</sup>
4020	10.20 <sup>+0.20/-0.05</sup>	5.10 <sup>+0.2/-0.05</sup>	0.60 <sup>+0.20/-0.1</sup>	0.9 <sup>±0.2</sup>



L = Length, B = Width, D = Thickness, C = Width of wrap around (in mm)

### Packaging:

Bulk in plastic bags – minimum quantity 30 pieces per value  
Blister tape acc. to IEC 60286-3 – minimum 500 pieces per value  
Reel diameter 180 mm or 330 mm

### Ordering Data:

Type – value – tolerance – TCR – packaging  
Example: CHM 2512 10G ±10% TCR 100 Tape 180 mm

Not trimmed parts are indicated by the extension "NA" in the order code:  
Type – value – tolerance – NA – TCR - packaging  
Example: CHM 2512 10G ±10% NA TCR 100 Tape 180 mm

If no requirements for TCR and taping are given, the highest value in table will be supplied and packaging is bulk. Standard measuring voltage is 10V, other measuring voltages on request.

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### Technical data – depending on size:

Size	0805	1206	1210	2010	2512	4020
Power rating $P_{70}$ (mW) ( $P_{155} = 0$ mW)	125	250	350	500	1000 <sup>1)</sup>	1500 <sup>1)</sup>
Working voltage $U_{-}$ , $U_{\text{eff}}$ (V) trimmed untrimmed (Tol. $\geq 5\%$ )	200 600	600 1000	1000 1200	1500 2000	2000 3000	4000 6000

Ranges / Tolerances / TCR <sup>2)</sup> / VCR						
100K – 100M	0.5/1/2/5/10% TC25/50/100 <50 ppm/V	0.5/1/2/5/10% TC25/50/100 <50 ppm/V	0.5/1/2/5/10% TC25/50/100 <25 ppm/V	0.5/1/2/5/10% TC25/50/100 <25 ppm/V	0.5/1/2/5/10% TC25/50/100 <10 ppm/V	0.5/1/2/5/10% TC25/50/100 <10 ppm/V
>100M – 1G	2/5/10/20% TC50/100/250 <250 ppm/V	2/5/10/20% TC50/100/250 <100 ppm/V	1/2/5/10/20% TC25/50/100 <50 ppm/V	1/2/5/10/20% TC25/50/100 <50 ppm/V	1/2/5/10/20% TC25/50/100 <25 ppm/V	1/2/5/10/20% TC25/50/100 <10 ppm/V
>1G – 10G	5/10/20% TC100/250 <500 ppm/V	5/10/20% TC100/250 <250 ppm/V	2/5/10/20% TC50/100 <100 ppm/V	2/5/10/20% TC50/100 <100 ppm/V	2/5/10/20% TC50/100 <100 ppm/V	1/2/5/10/20% TC50/100 <25 ppm/V
>10G – 100G	10/20/30% TC1000/2000 <1000 ppm/V	10/20/30% TC500/1000 <1000 ppm/V	5/10/20/30% TC500/1000 <500 ppm/V	5/10/20/30% TC250/500 <500 ppm/V	5/10/20/30% TC250/500 <250 ppm/V	2/5/10/20/30% TC250/500 <100 ppm/V
>100G – 1T	10/20/30% TC2000/3000 <2000 ppm/V	10/20/30% TC1000/2000 <2000 ppm/V	5/10/20/30% TC1000/2000 <1000 ppm/V	5/10/20/30% TC500/1000 <1000 ppm/V	5/10/20/30% TC500/1000 <500 ppm/V	5/10/20/30% TC500/1000 <250 ppm/V
>1T – 10T	–	10/20/30% TCR/VCR on request	10/20/30% TCR/VCR on request	10/20/30% TCR/VCR on request	10/20/30% TCR/VCR on request	10/20/30% TCR/VCR on request

<sup>1)</sup> At continuous power dissipation the dimensions of solder-pads have to secure sufficient heat-conduction

<sup>2)</sup> TC25/50: Temperature range +25°C...+85°C

Lower values of tolerance, TCR and VCR on request and agreement

### Technical data – general:

Temperature range	-55°C ... +155°C
Climatic category acc. to EN 60068-1	55/155/56
Solderability acc. EN 60068-2-58 (lead-free and lead-containing) <sup>3)</sup>	250°C, 3s
Max. soldering temperature acc. EN 60068-2-58	260°C, 10s

Extended temperature range up to 300°C possible- see datasheet: High temperature chip resistors

Long term stability	<1G	<10G	$\geq 10G$
Storage 125°C/1000h	<0.5%	<1%	<2%
Max voltage/1000h	<0.5%	<1%	<2%

<sup>3)</sup> Up to 6 months after shipment; longer at storage in Nitrogen  
Data not specified according EN 140401-802 (CECC 40401-802)

Specifications subject to change without notice

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