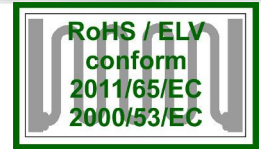


# CHM-Series Precision High-Value Chip Resistors

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

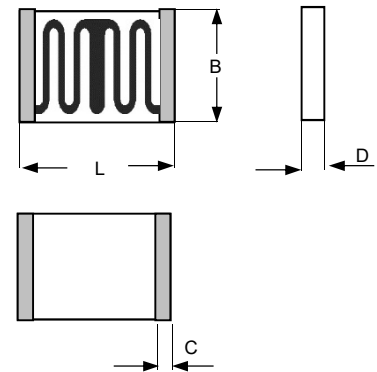
## Features:

- Meander structured high value chip resistors in thick film technology
- Low temperature and voltage dependency
- Suitable for high vacuum applications – no organics
- Termination: PtAg for conductive glueing and soldering
- High working voltage up to 6000 V
- High temperature application up to 300°C possible (CHM-HT)
- Non-magnetic



## 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  
 Embossed carrier tape acc. to IEC 60286-3 – minimum 500 pieces per value  
 Reel diameter 180 mm or 330 mm

## Ordering Data:

Type – value – tolerance – Temperature coefficient TK

Example: *CHM 2512 10G ±10% TK100*

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

Type – value – tolerance – NA – Temperature coefficient TK

Example: *CHM 2512-NA 10G ±10% TK100*

Without requirement for the temperature coefficient TK, the standard value (highest value in table) will be supplied. Standard measuring voltage is 10V. Different voltages on request and agreement (specify explicitly).

# CHM-Series

## Precision High-Value Chip Resistors

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

### Technical data – depending on size:

Size	0805	1206	1210	2010	2512	4020
Power rating $P_{70}$ (mW) ( $P_{155} = 0$ mW)	125	250	350	750 <sup>1)</sup>	1000 <sup>1)</sup>	2000 <sup>1)</sup>
Working voltage $U_{-}$ , $U_{eff}$ (V) Standard (trimmed) NA (untrimmed, Tol. $\geq 5\%$ )	200 400	600 1000	800 1200	1500 2000	2500 3000	4000 6000

Ranges / Tolerances / Temperature coefficient TK <sup>2)</sup> / VCR <sup>3)</sup>						
100K – 100M	0.5/1/2/5/10% TK25/50/100 100 ppm/V	0.5/1/2/5/10% TK25/50/100 50 ppm/V	0.5/1/2/5/10% TK25/50/100 50 ppm/V	0.5/1/2/5/10% TK25/50/100 25 ppm/V	0.5/1/2/5/10% TK25/50/100 10 ppm/V	0.25/ ... /10% TK25/50/100 5 ppm/V
>100M – 1G	2/5/10/20% TK50/100/250 250 ppm/V	2/5/10/20% TK50/100/250 100 ppm/V	1/2/5/10/20% TK25/50/100 50 ppm/V	1/2/5/10/20% TK25/50/100 50 ppm/V	1/2/5/10/20% TK25/50/100 25 ppm/V	0.5/ ... /20% TK25/50/100 10 ppm/V
>1G – 10G	5/10/20% TK250/500 500 ppm/V	5/10/20% TK100/250 250 ppm/V	2/5/10/20% TK25/50/100 100 ppm/V	2/5/10/20% TK25/50/100 100 ppm/V	2/5/10/20% TK25/50/100 50 ppm/V	1/2/5/10/20% TK25/50/100 10 ppm/V
>10G – 100G	10/20/30% TK1000/2000 1000 ppm/V	10/20/30% TK500/1000 500 ppm/V	5/10/20/30% TK500/1000 500 ppm/V	5/10/20/30% TK250/500 250 ppm/V	5/10/20/30% TK100/250/500 100 ppm/V	2/5/10/20/30% TK50/100/250 50 ppm/V
>100G – 1T	20/30% TK2000 3000 ppm/V	10/20/30% TK1000/2000 1000 ppm/V	5/10/20/30% TK1000/2000 1000 ppm/V	5/10/20/30% TK500/1000 500 ppm/V	5/10/20/30% TK250/500 250 ppm/V	5/10/20/30% TK250/500 100 ppm/V
>1T – 3T	–	on request	on request	on request	10/20/30% TK2000 1000 ppm/V	10/20/30% TK1000 500 ppm/V
>3T – 10T	–	-	-	on request	10/20/30% TK3000 2000 ppm/V	10/20/30% TK2000 1000 ppm/V

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

<sup>2)</sup> Temp. coefficient TK: in ppm/K; +25°C...+125°C; TK lower than standard TK (highest value) or R >100G: +25°C...+85°C

<sup>3)</sup> VCR: typical values, all negative, not for all temperature coefficient values available

Lower values of tolerance, Temperature coefficient TK and VCR on request and agreement only

### Technical data – general:

Operating temperature range	-55°C ... +155°C
Climatic category acc. to EN 60068-1	55/155/56
Solderability acc. to EN 60068-2-58 (lead-free and lead-containing) <sup>4)</sup>	250°C, 3s
Max. soldering temperature acc. to EN 60068-2-58	260°C, 10s

Extended temperature range up to 300°C: see datasheet "High temperature chip resistors" CHM-HT

Long term stability	< 1G	< 10G	$\geq 10G$
Load Life 70°C/1000h	< 0.25%	< 0.5%	< 1%
Storage 125°C/1000h	< 0.5%	< 1%	< 2%
Max. voltage/1000h	< 0.5%	< 1%	< 2%

<sup>4)</sup> 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).