

CRA-Series

Trimmable Chip Resistors

Sizes: 0603, 0805, 1206, 1210, 1216, 1216H

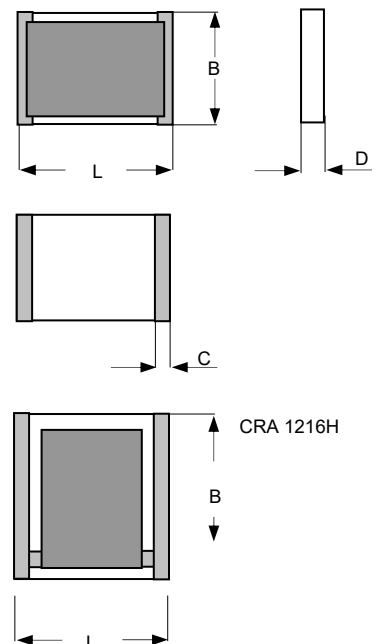
Features:

- Trimmable chip resistors in thick film technology (without pre-trimm/no trimm cut)
- Nickel-barrier / matte Tin terminations
- Resistance element glass-passivated
- Suitable for Laser and air-abrasive trimming
- High trimming ratios by special geometries
- Suitable for high vacuum applications – no organics



Dimensions:

Baugröße		L (mm)	B (mm)	D (mm)	C (mm)
Imperial (Standard)	Metric (Info)	Länge	Breite	Dicke	Breite Umkontakt
0603	1608	1.50 $+0.15/-0.05$	0.80 $+0.15/-0.05$	0.40 $+0.15/-0.05$	0.2 $+0.2/-0.1$
0805	2012	2.00 $+0.15/-0.05$	1.25 $+0.15/-0.05$	0.40 $+0.15/-0.05$	0.3 $+0.2/-0.1$
1206	3216	3.20 $+0.15/-0.05$	1.50 $+0.2/-0.05$	0.40 $+0.15/-0.05$	0.3 $+0.2/-0.1$
1210	3225	3.20 $+0.15/-0.05$	2.50 $+0.2/-0.05$	0.50 $+0.15/-0.05$	0.8 ± 0.2
1216	3240	3.20 $+0.2/-0.05$	4.00 $+0.2/-0.05$	0.50 $+0.2/-0.1$	0.4 ± 0.2
1216H	3240	3.20 $+0.2/-0.05$	4.00 $+0.2/-0.05$	0.50 $+0.2/-0.1$	0.4 ± 0.2



Packaging:

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

Ordering Data:

Type – value – tolerance – temperature coefficient TCR

Example: CRA 1216 100R $\pm 20\%$ - TCR50

Without requirement for the temperature coefficient TCR, the standard value (highest value in table) will be supplied.

CRA-Series Trimmable Chip Resistors

Sizes: 0603, 0805, 1206, 1210, 1216, 1216H

Technical data – depending on size:

Size	0603	0805	1206	1210	1216	1216H
Power rating P_{70} (mW) ($P_{155} = 0$ mW)	100	125	250	350	400	400
Working voltage U_{-} , U_{eff} (V) ³⁾						
trimmed (trimming by user)	75	100	200	200	200	200
untrimmed (as delivered)	220	300	600	600	600	600
Trimming ratios (single cut) ¹⁾	1,5	1,5	2	3	4	8

Ranges / Tolerances ⁴⁾ / Temperature coefficient TCR ²⁾						
1R – < 10R	10/20/30% TCR250	10/20/30% TCR250	10/20/30% TCR250	10/20/30% TCR250	10/20/30% TCR250	10/20/30% TCR250
10R – 10M	5/10/20/30% TCR50/100	5/10/20/30% TCR50/100	5/10/20/30% TCR50/100	5/10/20/30% TCR50/100	5/10/20/30% TCR50/100	5/10/20/30% TCR50/100

¹⁾ Detailed information on request.

²⁾ Temperature coefficient TCR: in ppm/K; +25°C...+125°C; TCR below standard TCR (highest value): +25°C...+85°C; TCR50 not in the resistance range R<100R

³⁾ Continuous operating voltage (U_{-} , U_{eff}): $V \leq \sqrt{P \cdot R}$ or max. working voltage (the lower value)

⁴⁾ Non-symmetric tolerances also available (e.g. -0/+20%)

Technical data – general:

Operating 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)	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 – 10M	<10R
Storage 125°C/1000h	<0,5%	<1%
Storage 155°C/1000h	<1%	<2%
Load P_{70} 70°C/1000h	<1%	<2%
Damp heat (56d/40°C/96%)	<0,5%	<1%

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