

CRS-Series Standard Chip Resistors

Sizes: 0402, 0603, 0805, 1206

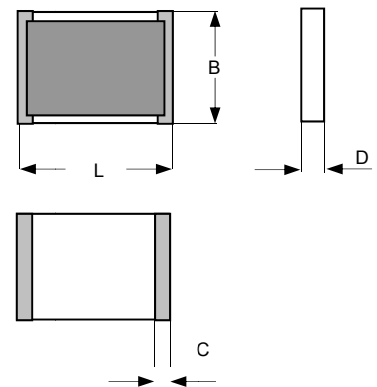
Features:

- Chip resistors in thick film technology
- Resistance element glass-passivated
- Nickel-barrier / matte Tin terminations
- RF-versions untrimmed
- Resistance values up to 500 MΩ
- Working voltage up to 400 Volts
- Suitable for high vacuum applications – no organics



Dimensions:

Size	L	B	D	C
0402	0.95 ^{+0.10/-0.05}	0.48 ^{+0.10/-0.05}	0.28 ^{+0.10/-0.05}	0.1 ^{+0.1/-0.05}
0603	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	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	3.20 ^{+0.15/-0.05}	1.50 ^{+0.2/-0.05}	0.40 ^{+0.15/-0.05}	0.3 ^{+0.2/-0.1}



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

Packaging:

Bulk in plastic bags – minimum quantity 100 pieces per value
Embossed carrier tape acc. to EN 60286-3 – minimum 500 pieces per value
Reel diameter 180 mm or 330 mm

Ordering Data:

Type – value – tolerance – TCR – packaging
Example: *CRS 0805 100K ± 1% - TK100 Tape 180 mm*

Untrimmed parts are indicated by the extension “NA” in the order code:
Type – value – tolerance – NA – TCR - packaging
Example: *CRS 0805 100K ± 10% NA TK100 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.

CRS-Series Standard Chip Resistors

Sizes: 0402, 0603, 0805, 1206

Technical data – depending on size:

Size	0402	0603	0805	1206
Power rating P_{70} (mW) ($P_{155} = 0$ mW)	50	100	125	250
Max. working voltage (V) ¹⁾ Standard (trimmed) NA (untrimmed, Tol. $\geq 5\%$)	30 60	75 150	100 200	200 400

Ranges ²⁾ / Tolerances / TCR ³⁾				
0R1 – <1R	–	10/20% TC250	5/10/20% TC250	5/10/20% TC250
1R – <10R	10/20% TC250	5/10/20% TC100/250	2/5/10/20% TC100/250	2/5/10/20% TC100/250
10R – <100R	5/10/20% TC100	1/.../20% TC100	1/.../20% TC50/100	1/.../20% TC50/100
100R – 1M	1/2/5/10/20% TC50/100	1/.../20% TC50/100	0.5/.../20% TC50/100	0.5/.../20% TC50/100
>1M – 10M	2/5/10/20% TC100/250	1/.../20% TC50/100	0.5/.../20% TC50/100	0.5/.../20% TC50/100
>10M – 100M	5/10/20% TC100/250	1/.../20% TC50/100	0.5/.../20% TC50/100	0.5/.../20% TC50/100
>100M – 500M	–	5/.../20% TC100/250	2/.../20% TC100/250	2/.../20% TC100/250

¹⁾ Continuous operating voltage (U_{-} , U_{eff}): $V \leq \sqrt{P \cdot R}$ or max. working voltage (the lower value)

²⁾ Available resistance values: E6, E12, E24, E48, E96 and intermediate values

³⁾ TCR: in ppm/K; +25°C...+125°C; TCR below standard TCR (highest value): +25°C...+85°C

Sizes 0805/1206: TCR 25 is available in CRM-series (range 100k – 100M only)

Zero-Ohm-Jumper: < 50 mOhm

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)	250°C, 3s
Max. soldering temperature acc. to EN 60068-2-58	260°C, 10s

Long term stability	< 10R	10R – 100M	> 100M
Storage 125°C/1000h	< 1%	< 0.5%	< 1%
Storage 155°C/1000h	< 2%	< 1%	< 2%
Load Life $P_{70}/70^{\circ}\text{C}/1000\text{h}$	< 1%	< 0.5%	< 1%
Short term overload	< 0.5%	< 0.25%	< 0.5%
Damp heat (56d/40°C/96%)	< 1%	< 0.5%	< 1%

Data not specified according EN 140401-802 (CECC 40401-802)