

CRS-Series Standard Chip Resistors

Sizes: 0402, 0603, 0805, 1206

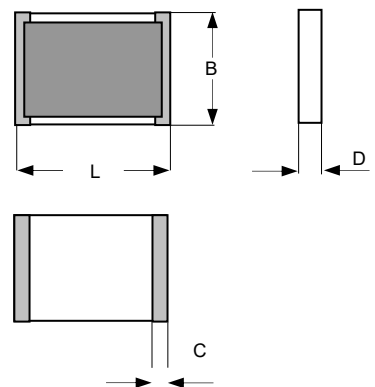
Features:

- 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 (mm)	B (mm)	D (mm)	C (mm)
Imperial (Standard)	Metric (ref. only)	length	width	thickness	width of wrap around
0402	1005	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	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}



Larger sizes on request

Packaging:

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

Ordering Data:

Type – value – tolerance – temperature coefficient TCR
 Example: *CRS 0805 100K ±1% TCR100*

Untrimmed parts are indicated by the extension “NA” in the order code:
 Type – NA – value – tolerance– temperature coefficient TCR
 Example: *CRS 0805-NA 100K ±10% TCR100*

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

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)	30	75	100	200
NA (untrimmed, Tol. ≥ 5%)	60	150	200	400

Ranges / Tolerances / Temperature coefficient TCR ²⁾				
0R1 – <1R	–	10/20% TCR250	5/10/20% TCR250	5/10/20% TCR250
1R – <10R	10/20% TCR250	5/10/20% TCR100/250	2/5/10/20% TCR100/250	2/5/10/20% TCR100/250
10R – <100R	5/10/20% TCR100	1/.../20% TCR100	1/.../20% TCR50/100	1/.../20% TCR50/100
100R – 1M	1/2/5/10/20% TCR50/100	1/.../20% TCR50/100	0.5/.../20% TCR50/100	0.5/.../20% TCR50/100
>1M – 10M	2/5/10/20% TCR100/250	1/.../20% TCR50/100	0.5/.../20% TCR50/100	0.5/.../20% TCR50/100
>10M – 100M	5/10/20% TCR100/250	1/.../20% TCR50/100	0.5/.../20% TCR50/100	0.5/.../20% TCR50/100
>100M – 500M	–	5/.../20% TCR100/250	2/.../20% TCR100/250	2/.../20% TCR100/250

¹⁾ Continuous operating voltage (U_–, U_{eff}): V ≤ √(P·R) or max. working voltage (the lower value)

²⁾ Temperature coefficient TCR: in ppm/K; +25°C...+125°C; TCR below standard TCR (highest value): +25°C...+85°C
Zero-Ohm-Jumper: < 50 mOhm

Other values of resistance, tolerance, temperature coefficient TCR 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)	250°C, 3s
Max. soldering temperature acc. to EN 60068-2-58	260°C, 10s
Moisture Sensitivity Level acc. to J-STD-020	MSL 1 (unlimited)

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°C/1000h	< 1%	< 0.5%	< 1%
Short term overload	< 0.5%	< 0.25%	< 0.5%
Damp heat (56d/40°C/96%)	< 1%	< 0.5%	< 1%

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