

CBW-Series Bondable Chip Resistors, non-magnetic

Sizes: 0402, 0603, 0805, 1206

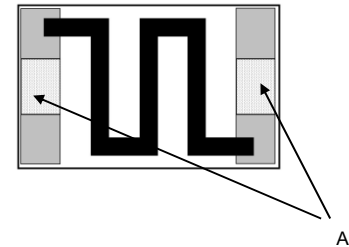
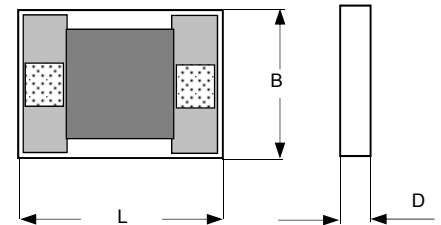
Features:

- Chip Resistors in thick film technology
- AgPd termination for flip chip assembly (face-down; for conductive epoxy assembly) or
- Gold termination for wire bonding (US/TC; face-up) as well as flip chip (face-down; for conductive epoxy assembly)
- Bottom side completely insulated
- No wrap-around
- High temperature application up to 200°C possible (CBW-HT)
- Non-magnetic



Dimensions:

Size	L	B	D	A (minimum)
0402	0,95 ^{+0,10/-0,05}	0,48 ^{+0,10/-0,05}	0,28 ^{+0,1/-0,05}	0.15 x 0.15
0603	1.50 ^{+0.15/-0.05}	0.80 ^{+0.15/-0.05}	0.40 ^{+0.15/-0.05}	0.20 x 0.20
0805	2.00 ^{+0.15/-0.05}	1.25 ^{+0.15/-0.05}	0.40 ^{+0.15/-0.05}	0.25 x 0.40
1206	3.20 ^{+0.15/-0.05}	1.50 ^{+0.2/-0.05}	0.40 ^{+0.15/-0.05}	0.30 x 0.50



L = Length, B = Width, D = Thickness, A = Bond Pad Size (in mm)

Other sizes and layouts are available on request.

Packaging:

Bulk in plastic bags – minimum quantity 100 pcs/value
 Waffle-Pack / Gel-Tray (JEDEC 2") – minimum 100 pcs/value
 Embossed carrier tape acc. to IEC 60286-3 – minimum 500 pcs/value (0402: min. 1000pcs)
 Reel diameter 180 mm or 330 mm

- Orientation in tape:
- ♦ face-up for wire bonding
 - ♦ face-down for flip-chip assembly

The orientation in the tape is to specify with order. If not specified face-up is used as standard.

Ordering Data:

Gold termination for face-up assembly (wire bonding)

Type – value – tolerance – TCR – termination

Example: CBW 0603 100K ±5% TCR100 Au

AgPd termination for face-down assembly (flip chip)

Type – value – tolerance – TCR

Example: CBW 0603 1G ±20% TCR1000

If no requirements for TCR and packaging are given, the highest value in table will be supplied and packaging is bulk. Standard measuring voltage is 10V. Different voltages on request and agreement (specify explicitly). Without specification the termination is AgPd for flip-chip application.

Specifications subject to change without notice

Made in Germany

Issue 02-2015

CBW-Series

Bondable Chip Resistors, non-magnetic

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
Working voltage U ₋ , U _{eff} (V) ³⁾	60	150	200	400

Value Ranges / Tolerances / TCR ¹⁾ / VCR ²⁾				
10R – 10M	5/10/20% TCR 100/250	5/10/20% TCR 50/100	5/10/20% TCR 50/100	5/10/20% TCR 50/100
>10M – 100M	5/10/20% TCR 100/250 500 ppm/V	5/10/20% TCR 50/100 500 ppm/V	5/10/20% TCR 50/100 500 ppm/V	5/10/20% TCR 50/100 250 ppm/V
>100M – 1G	10/20/30% TCR 500 1000 ppm/V	5/10/20% TCR 250/500 500 ppm/V	5/10/20% TCR 250/500 500 ppm/V	5/10/20% TCR 100/250 250 ppm/V
>1G – 10G	10/20/30% TCR 2000 2000 ppm/V	5/10/20% TCR 500/1000 1000 ppm/V	5/10/20% TCR 500/1000 1000 ppm/V	5/10/20% TCR 250/500 500 ppm/V
>10G – 100G	10/20/30% TCR 2000/3000 5000 ppm/V	10/20/30% TCR 2000/3000 3000 ppm/V	10/20/30% TCR 2000/3000 3000 ppm/V	5/10/20% TCR 500/1000 1000 ppm/V
>100G – 1T	<i>on Request</i>	<i>on Request</i>	10/20/30% TCR 3000 5000 ppm/V	10/20/30% TCR 2000 2000 ppm/V

¹⁾ TCR: in ppm/K; +25°C...+125°C; TCR lower than standard TCR (highest value) or value >100G: +25°C...+85°C

²⁾ VCR: typical values, all negative, not for all TCR values available

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

Lower values of tolerance, 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

Extended temperature range up to 200°C: see datasheet “High temperature chip resistors” CBW-HT

Long term stability	< 10M	10M - 1G	1G - 10G	≥10G
Storage 125°C/1000h	< 0.5%	<1%	<2%	<5%
Max. voltage /1000h	< 0.5%	<0.5%	<1%	<2%
Short term overload (2,5x, 5s)	< 0.25%			

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