

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
- Bottom side completely insulated
- No wrap-around
- Non-magnetic



Dimensions:

| Size | L | B | D | A (Minimum bondpad size) |
|------|------------------|------------------|------------------|--------------------------|
| 0402 | 1.04 ±0.05 | 0.50 ±0.05 | 0.30 +0.15/-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 (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 (not 0402)
 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

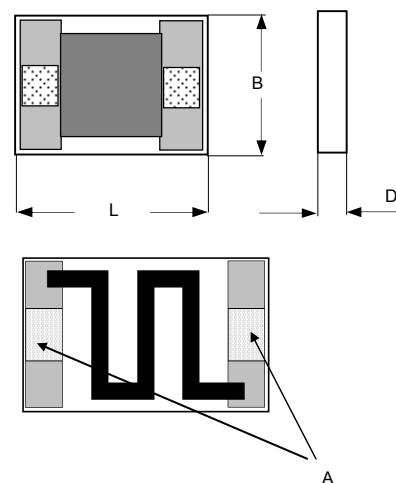
Example: CBW 0603 100K ±5% TCR100 Au

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.



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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) | 60 | 150 | 200 | 400 |

| Value Ranges / Tolerances / TCR ¹⁾ / VCR ²⁾ | | | | |
|--|--|---|---|---------------------------------------|
| 10R – 10M | 5/10/20% TCR100/250 | 5/10/20% TCR50/100 | 5/10/20% TCR50/100 | 5/10/20% TCR50/100 |
| >10M – 100M | 5/10/20% TCR100/250 500 ppm/V | 5/10/20% TCR50/100 500 ppm/V | 5/10/20% TCR50/100 500 ppm/V | 5/10/20% TCR50/100 250 ppm/V |
| >100M – 1G | 10/20/30% TCR500/1000 1000 ppm/V | 5/10/20% TCR250/500 1000 ppm/V | 5/10/20% TCR250/500 1000 ppm/V | 5/10/20% TCR100/250 250 ppm/V |
| >1G – 10G | 10/20/30% TCR2000 2000 ppm/V | 5/10/20% TCR500/1000 2000 ppm/V | 5/10/20% TCR500/1000 2000 ppm/V | 5/10/20% TCR250/500 500 ppm/V |
| >10G – 100G | 10/20/30% TCR2000 5000 ppm/V | 10/20/30% TCR2000/3000 5000 ppm/V | 10/20/30% TCR2000/3000 5000 ppm/V | 5/10/20% TCR500/1000 2000 ppm/V |
| >100G – 1T | - | 20/30/50% TCR3000 10000 ppm/V | 10/20/30% TCR3000 10000 ppm/V | 10/20/30% TCR2000 5000 ppm/V |

Other values, tolerances, TCR and VCR on request and agreement

¹⁾ TCR: in ppm/K; +25°C...+125°C; TCR below standard TCR (highest value) and values >100G: +25°C...+85°C

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

Technical data – general:

| | |
|--------------------------------------|------------------|
| Operating temperature range | -55°C ... +155°C |
| Climatic category acc. to EN 60068-1 | 55/155/56 |

| 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)