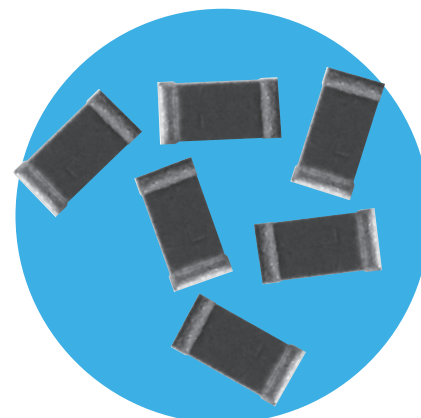


# Glueable Chip Resistor

## GCR Series

- Suitable for conductive adhesive
- Planar and wraparound versions
- High temperature operation to 200°C
- Non-magnetic (G, P & EW types)
- Range 0805 to 2512 at 1R0 to 10M
- RoHS compliant

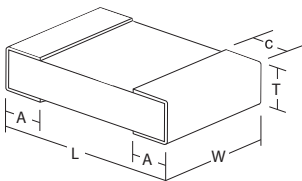


All parts are Pb-free and comply with EU Directive 2011/65/EU (RoHS2)

## Electrical Data

|                                     |           |                                                      |      |       |      |
|-------------------------------------|-----------|------------------------------------------------------|------|-------|------|
| Size                                |           | 0805                                                 | 1206 | 2010  | 2512 |
| Power @70°C                         | W         | 0.125                                                | 0.25 | 0.625 | 1    |
| Resistance range                    | ohms      | 1R0 to 10M                                           |      |       |      |
| Tolerance                           | %         | 1, 5                                                 |      |       |      |
| LEV                                 | V         | 150                                                  | 200  | 400   | 500  |
| TCR                                 | ppm/°C    | <10R:200 ≥10R:100                                    |      |       |      |
| Operating temperature               | °C        | -55 to +200                                          |      |       |      |
| Thermal Impedance                   | °C/W      | 220                                                  | 160  | 75    | 40   |
| Values                              |           | E24 or E96 preferred - other values to special order |      |       |      |
| Zero-ohm jumper current rating      | A         | 1.5                                                  | 2    |       |      |
| Zero-ohm jumper residual resistance | milliohms | <50                                                  |      |       |      |

## Physical Data (All dimensions in mm and nominal weight in g)

|      | L                 | W             | T             | A & C             | Wt.   |                                                                                      |                                                                                       |
|------|-------------------|---------------|---------------|-------------------|-------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 0805 | 2.0<br>+0.2/-0.15 | 1.25<br>±0.15 | 0.5<br>±0.15  | 0.4<br>±0.2       | 0.009 |  |  |
| 1206 | 3.15<br>+0.2/-0.2 | 1.6<br>±0.15  | 0.5<br>±0.15  | 0.45<br>±0.2      | 0.020 |                                                                                      |                                                                                       |
| 2010 | 5.0<br>±0.2       | 2.5<br>±0.2   | 0.65<br>±0.15 | 0.5<br>+0.25/-0.3 | 0.036 |                                                                                      |                                                                                       |
| 2512 | 6.25<br>±0.25     | 3.2<br>±0.2   | 0.65<br>±0.15 | 0.6<br>+0.25/-0.3 | 0.055 |                                                                                      |                                                                                       |

### Construction

Planar gold G type or PtAg P types: Electrodes, resistor material and overglaze are printed onto an alumina substrate. The resistors are laser trimmed to the required value and protected.

Wraparound EW type: Thick-film PtAg electrodes, resistor material and overglaze are printed onto an alumina substrate. The resistors are laser trimmed to the required value and protected. The terminations are wraparound coated with a polymer Ag material.

Wraparound GW type: These are made as the EW type then plated with a nickel barrier and Gold. All termination styles are suitable for attachment with conductive adhesive.

### Marking

The components are not marked; all data is printed onto the packaging.

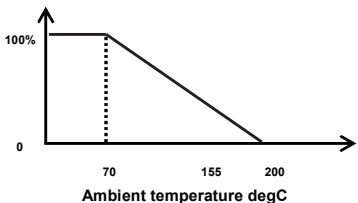
### Solvent Resistance

The component is resistant to all normal industrial cleaning solvents suitable for printed circuits.

### General Note

TT Electronics reserves the right to make changes in product specification without notice or liability.  
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Performance Data

|                                                     |    |                    |                                                                                                              |
|-----------------------------------------------------|----|--------------------|--------------------------------------------------------------------------------------------------------------|
|                                                     |    | Maximum            | <b>Derating Curve</b><br> |
| Load at rated power (1000hrs at 70°C)               | ΔR | 2% + 0.01Ω         |                                                                                                              |
| Derating from rated power at 70°C                   |    | See Derating Curve |                                                                                                              |
| Short term overload                                 | ΔR | 1% + 0.01Ω         |                                                                                                              |
| Dry heat (1000hrs at 200°C)                         | ΔR | 2% + 0.01Ω         |                                                                                                              |
| Damp heat steady state (56 days, 40°C, ≥90% RH)     | ΔR | 1% + 0.01Ω         |                                                                                                              |
| Climatic                                            | ΔR | 1% + 0.01Ω         |                                                                                                              |
| Temperature rapid change (5 cycles -55°C to +200°C) | ΔR | 1% + 0.01Ω         |                                                                                                              |

Packaging

0805 and 1206 GCR series resistors are supplied on 8mm carrier tape and 7 inch reels as per IEC 286-3, quantity per reel; 3000.  
2010 and 2512 GCR series resistors are supplied on 12mm carrier tape and 7 inch reels as per IEC 286-3, quantity per reel; 2010: 3000pcs; 2512: 1800pcs.

Ordering Procedure

**Example: GCR1206G-10KFT3** (GCR1206 in gold planar format at 10 kilohms ±1%, Pb-free)

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G | C | R | 1 | 2 | 0 | 6 | G | - | 1 | 0 | K | F | T | 3 |
| 1 |   |   |   |   | 2 |   | 3 |   |   | 4 |   | 5 |   |   |

| 1<br>Type | 2<br>Termination |                                   | 3<br>Value                                                                | 4<br>Tolerance  | 5<br>Packing |                    |                       |
|-----------|------------------|-----------------------------------|---------------------------------------------------------------------------|-----------------|--------------|--------------------|-----------------------|
| GCR0805   | G                | Gold planar                       | 3/4 characters<br>R = ohms<br>K = kilohms<br>M = megohms<br>R000 = jumper | F = ±1%         | T3           | 0805,1206,<br>2010 | Tape, up to 3000/reel |
| GCR1206   | P                | PtAg planar                       |                                                                           | J = ±5%         |              |                    |                       |
| GCR2010   | EW               | Polymer Ag wraparound             |                                                                           | Omit for jumper | T18          | 2512               | Tape, up to 1800/reel |
| GCR2512   | GW               | Ni Barrier & Au plated wraparound |                                                                           |                 |              |                    |                       |

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