RCD Components Inc, Optional TC: MC SERIES

**50mW (0201) to 3W (2040)**

**ZC SERIES**
Zero-ohm chip (1A - 25A)

□ Industry’s widest selection & lowest prices-0.1Ω to 22M, 50mW to 3W, 0.25% to 5%, TC’s to 50ppm
□ 0402, 0603, 0805, 1206 sizes heavily stocked in 1% & 5% (other sizes available from stock in many popular values)
□ Option V: +175° operating temperature
□ Option U: User-trimmable chips
□ Option P: Increased pulse capability
□ Military screening, custom values & TC, microwave design, etc.

RCD’s Series MC resistors utilize precision thick film technology offering inherently low inductance, exceptional reliability and superior performance. Heavy plating with NO LEACH™ nickel barrier assures superb solderability and long shelf life. State-of-the-art production line enables the industry’s most precise accuracies (0.25% & 50ppm) thereby replacing more costly thin-film chips in many applications. RCD offers low cost offshore assembly of 5M and leaded PCB’s (refer to RCD’s Assembly Services p.114 for more information).

### RCD Type MC, ZC
- **Wattage Rating**
- **Std TC ppm/C, typ.**
- **Resis. Range ±5% Tol**
- **Standard Resist. Range ±1% Tol**
- **Standard Resist. Range ±5% Tol**
- **MC Voltage Rating**
- **TYPE ZC Jumper**
- **Dimensions Inch (mm)**

<table>
<thead>
<tr>
<th>RCD Type</th>
<th>Wattage Rating</th>
<th>Std TC ppm/C, typ.</th>
<th>Resis. Range ±5% Tol</th>
<th>Standard Resist. Range ±1% Tol</th>
<th>Standard Resist. Range ±5% Tol</th>
<th>MC Voltage Rating</th>
<th>TYPE ZC Jumper</th>
<th>Dimensions Inch (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0201</td>
<td>.05W</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0402</td>
<td>.063W</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>50V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0603</td>
<td>.1W</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>50V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0805</td>
<td>.125W</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>150V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1206</td>
<td>.25W - .65W</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>250V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1210</td>
<td>.33W</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>200V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2040</td>
<td>2.03W</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>350V</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TYPICAL PERFORMANCE

- **Thermal Shock (-65°C to +125°C)**: 0.2% ΔR
- **Overload (2.5x V, SS, NTE, 2x rated V)**: 1% ΔR
- **Low Temp. Operation (-55°C)**: 0.2% ΔR
- **High Temp. Exposure (125°C, 100hrs)**: 0.5% ΔR
- **Resistance to Solder Heat**: 0.2% ΔR
- **Moisture Resistance**: 0.5% ΔR
- **Load Life (1000 hrs.)**: 1.0% ΔR
- **Operating Temp. (+175°C Opt. V)**: -55 to +155°C
- **Derating (above 70°C)**: Derate W & V by 1.16%/°C

### P/N DESIGNATION:
- **RCD Type**: MC or ZC
- **Chip Size**: 0201 to 2040
- **Options**: U, P, etc. (leave blank if std)
- **Resis. Code**: 0.25% to 1% Tol: 3 signif. digits & multiplier (R100= 1Ω, R1000=10Ω, R10000=100Ω, 100Ω=1Ω, R10=10Ω) Leave blank on ZC zero-ohm chips
- **Tolerance**: J=5%, F=1%, D=0.5%, C=0.25% Leave blank on ZC zero-ohm chips
- **Packaging**: B=Bulk, T=Tape & Reel
- **Optional TC**: 50=50ppm, 101=100ppm, 201=200ppm (leave blank if std)
- **Termination**: W = Lead-free (std), Q = Tin/Lead (leave blank if both acceptable)

---

**PULSE WITHSTAND CHART**

Pulse capability is dependent on res. value, waveform, repetition, etc. Chart is a general guide for Opt. P version, single or infrequent pulses, with peak voltage levels not exceeding 150V for 0402 & 0603 size, 300V for 0805, 400V for 1206 & 1210, 450V for 2040 & 2512. Max pulse wattage for standard parts (w/o Opt.P) is 50% less, max pulse voltage is 50V less. Increased pulse levels available. For improved performance and reliability, pulse derating factor is recommended (30-50% typ., refer to JR-42). Verify selection by evaluating under worst-case conditions.

---

**MC SERIES**
- 50mW (0201) to 3W (2040)

---

**ZC SERIES**
- Zero-ohm chip (1A - 25A)