## Vishay Dale

# Thick Film Chip Resistors, Industrial 



## FEATURES

- Operating temperature range: $-55^{\circ} \mathrm{C}$ to $+150^{\circ} \mathrm{C}$
- Same materials and construction as MIL-PRF-55342 chip resistors
- Termination: Tin/Lead wraparound termination over
 nickel barrier. Also available with lead (Pb)-free wraparound terminations.
- Capability to develop specific reliability programs designed to customer requirements
- Size, value, packaging and materials can be customized for special customer requirements.
- For zero ohm jumpers, see Vishay Dale's RCWP Jumper data sheet

STANDARD ELECTRICAL SPECIFICATIONS

| GLOBAL MODEL | HISTORICAL MODEL | $\begin{gathered} \text { POWER RATING } \\ P_{70}{ }^{\circ} \mathrm{C} \\ \mathbf{W}^{(1)} \end{gathered}$ | MAXIMUM OPERATING VOLTAGE | TEMPERATURE COEFFICIENT $\mathrm{ppm} /{ }^{\circ} \mathrm{C}$ | TOLERANCE $\%$ | RESISTANCE RANGE $\Omega$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| RCWP0201 | RCWP-0201 | 0.05 | 30 | $\begin{gathered} 300 \\ 100,300 \end{gathered}$ | $\begin{aligned} & \pm 5 \text { to } \pm 10 \\ & \pm 1 \text { to } \pm 10 \end{aligned}$ | 10 to 46.4 47 to 1 M |
| RCWP0502 | RCWP-0502 | 0.05 | 40 | $\begin{gathered} 300 \\ 100,300 \end{gathered}$ | $\begin{aligned} & \pm 2 \text { to } \pm 10 \\ & \pm 1 \text { to } \pm 10 \end{aligned}$ | $\begin{gathered} 1 \text { to } 9.1 \\ 10 \text { to } 22 \mathrm{M} \end{gathered}$ |
| RCWP0302 | RCWP-0302 | 0.04 | 15 | $\begin{gathered} 300 \\ 100,300 \end{gathered}$ | $\begin{aligned} & \pm 2 \text { to } \pm 10 \\ & \pm 1 \text { to } \pm 10 \end{aligned}$ | $\begin{gathered} 1 \text { to } 9.1 \\ 10 \text { to } 22 \mathrm{M} \end{gathered}$ |
| RCWP0402 | RCWP-0402 | 0.05 | 30 | $\begin{gathered} 300 \\ 100,300 \end{gathered}$ | $\begin{aligned} & \pm 2 \text { to } \pm 10 \\ & \pm 1 \text { to } \pm 10 \end{aligned}$ | $\begin{gathered} \hline 1 \text { to } 9.1 \\ 10 \text { to } 22 \mathrm{M} \end{gathered}$ |
| RCWP0603 | RCWP-0603 | 0.10 | 50 | $\begin{gathered} 300 \\ 100,300 \end{gathered}$ | $\begin{aligned} & \pm 2 \text { to } \pm 10 \\ & \pm 1 \text { to } \pm 10 \end{aligned}$ | $\begin{gathered} 1 \text { to } 5.6 \\ 5.62 \text { to } 22 \mathrm{M} \end{gathered}$ |
| RCWP0540 | RCWP-540 | 0.08 | 40 | $\begin{gathered} 300 \\ 100,300 \end{gathered}$ | $\begin{aligned} & \pm 2 \text { to } \pm 10 \\ & \pm 1 \text { to } \pm 10 \end{aligned}$ | $\begin{gathered} 1 \text { to } 9.1 \\ 10 \text { to } 22 \mathrm{M} \end{gathered}$ |
| RCWP0550 | RCWP-550 | 0.125 | 50 | $\begin{gathered} 300 \\ 100,300 \end{gathered}$ | $\begin{aligned} & \pm 2 \text { to } \pm 10 \\ & \pm 1 \text { to } \pm 10 \end{aligned}$ | $\begin{gathered} 1 \text { to } 9.1 \\ 10 \text { to } 22 \mathrm{M} \end{gathered}$ |
| RCWP0575 | RCWP-575 | 0.15 | 70 | $\begin{gathered} 300 \\ 100,300 \end{gathered}$ | $\begin{aligned} & \pm 2 \text { to } \pm 10 \\ & \pm 1 \text { to } \pm 10 \end{aligned}$ | $\begin{gathered} 1 \text { to } 5.6 \\ 5.62 \text { to } 22 \mathrm{M} \end{gathered}$ |
| RCWP5100 | RCWP-5100 | 0.20 | 100 | $\begin{gathered} 300 \\ 100,300 \end{gathered}$ | $\begin{aligned} & \pm 2 \text { to } \pm 10 \\ & \pm 1 \text { to } \pm 10 \end{aligned}$ | $\begin{gathered} 1 \text { to } 5.6 \\ 5.62 \text { to } 22 \mathrm{M} \end{gathered}$ |
| RCWP1206 | RCWP-1206 | 0.25 | 100 | $\begin{gathered} 300 \\ 100,300 \end{gathered}$ | $\begin{aligned} & \pm 2 \text { to } \pm 10 \\ & \pm 1 \text { to } \pm 10 \end{aligned}$ | $\begin{gathered} 1 \text { to } 5.6 \\ 5.62 \text { to } 22 \mathrm{M} \end{gathered}$ |
| RCWP5150 | RCWP-5150 | 0.35 | 125 | $\begin{gathered} 300 \\ 100,300 \end{gathered}$ | $\begin{aligned} & \pm 2 \text { to } \pm 10 \\ & \pm 1 \text { to } \pm 10 \end{aligned}$ | 1 to 5.6 <br> 5.62 to 22 M |
| RCWP1100 | RCWP-1100 | 0.50 | 100 | $\begin{gathered} 300 \\ 100,300 \end{gathered}$ | $\begin{aligned} & \pm 2 \text { to } \pm 10 \\ & \pm 1 \text { to } \pm 10 \end{aligned}$ | $\begin{gathered} 1 \text { to } 5.6 \\ 5.62 \text { to } 22 \mathrm{M} \end{gathered}$ |
| RCWP7225 | RCWP-7225 | 0.60 | 200 | $\begin{gathered} 300 \\ 100,300 \end{gathered}$ | $\begin{aligned} & \pm 2 \text { to } \pm 10 \\ & \pm 1 \text { to } \pm 10 \end{aligned}$ | 1 to 5.6 <br> 5.62 to 22 M |
| RCWP2010 | RCWP-2010 | 0.80 | 200 | $\begin{gathered} 300 \\ 100,300 \end{gathered}$ | $\begin{aligned} & \pm 2 \text { to } \pm 10 \\ & \pm 1 \text { to } \pm 10 \end{aligned}$ | 1 to 5.6 <br> 5.62 to 22 M |
| RCWP2512 | RCWP-2512 | 1.0 | 200 | $\begin{gathered} 300 \\ 100,300 \end{gathered}$ | $\begin{aligned} & \pm 2 \text { to } \pm 10 \\ & \pm 1 \text { to } \pm 10 \end{aligned}$ | $\begin{gathered} 1 \text { to } 5.6 \\ 5.62 \text { to } 22 \mathrm{M} \end{gathered}$ |

## Notes

${ }^{(1)}$ Power rating depends on the max. temperature at the solder point, the component placement density and the substrate material

- Consult factory for extended resistance range


## GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: RCWP510010K0GMWB (preferred part numbering format)


Historical Part Number: RCWP-5100103G (will continue to be accepted)

| RCWP-5100 | 103 | G | T03 |
| :---: | :---: | :---: | :---: |
| , | , |  |  |
| HISTORICAL MODEL | RESISTANCE VALUE | TOLERANCE CODE | PACKAGING CODE |



## Vishay Dale

DIMENSIONS in inches [millimeters]


| GLOBAL MODEL | $\begin{gathered} \text { A } \\ \text { (Length) } \end{gathered}$ | B (Width) | $\begin{gathered} \text { C } \\ \text { (Height) } \end{gathered}$ | $\begin{gathered} \text { D } \\ \text { (Top Term) } \end{gathered}$ | E (Bottom Term) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| RCWP0201 | $\begin{gathered} 0.024 \pm 0.002 \\ {[0.60 \pm 0.05]} \end{gathered}$ | $\begin{gathered} 0.012 \pm 0.002 \\ {[0.30 \pm 0.05]} \end{gathered}$ | $\begin{gathered} 0.009 \pm 0.002 \\ {[0.23 \pm 0.05]} \end{gathered}$ | $\begin{aligned} & 0.006 \pm 0.003 \\ & {[0.15 \pm 0.07]} \end{aligned}$ | $\begin{gathered} 0.006+0.002-0.004 \\ {[0.15+0.05-0.10]} \end{gathered}$ |
| RCWP0302 | $\begin{gathered} 0.034 \pm 0.004 \\ {[0.86 \pm 0.10]} \end{gathered}$ | $\begin{gathered} 0.021 \pm 0.003 \\ {[0.53 \pm 0.08]} \end{gathered}$ | $\begin{gathered} 0.015 \pm 0.003 \\ {[0.38 \pm 0.08]} \end{gathered}$ | $\begin{gathered} 0.007 \pm 0.005 \\ {[0.18 \pm 0.13]} \end{gathered}$ | $\begin{gathered} 0.008 \pm 0.005 \\ {[0.20 \pm 0.13]} \end{gathered}$ |
| RCWP0402 | $\begin{gathered} 0.039 \pm 0.003 \\ {[0.99 \pm 0.08]} \end{gathered}$ | $\begin{gathered} 0.020 \pm 0.003 \\ {[0.51 \pm 0.08]} \end{gathered}$ | $\begin{gathered} 0.013 \pm 0.003 \\ {[0.33 \pm 0.08]} \end{gathered}$ | $\begin{gathered} 0.010 \pm 0.005 \\ {[0.25 \pm 0.13]} \end{gathered}$ | $\begin{aligned} & 0.010 \pm 0.005 \\ & {[0.25 \pm 0.13]} \end{aligned}$ |
| RCWP0502 | $\begin{gathered} 0.055 \pm 0.005 \\ {[1.40 \pm 0.13]} \end{gathered}$ | $\begin{aligned} & 0.023 \pm 0.003 \\ & {[0.58 \pm 0.08]} \end{aligned}$ | $\begin{gathered} 0.015 \pm 0.003 \\ {[0.38 \pm 0.08]} \end{gathered}$ | $\begin{aligned} & 0.010 \pm 0.005 \\ & {[0.25 \pm 0.13]} \end{aligned}$ | $\begin{aligned} & 0.015 \pm 0.005 \\ & {[0.38 \pm 0.13]} \end{aligned}$ |
| RCWP0540 | $\begin{gathered} 0.055 \pm 0.005 \\ {[1.40 \pm 0.13]} \end{gathered}$ | $\begin{aligned} & 0.040 \pm 0.005 \\ & {[1.02 \pm 0.13]} \end{aligned}$ | $\begin{gathered} 0.020 \pm 0.005 \\ {[0.51 \pm 0.13]} \end{gathered}$ | $\begin{gathered} 0.010 \pm 0.005 \\ {[0.25 \pm 0.13]} \end{gathered}$ | $\begin{aligned} & 0.010 \pm 0.005 \\ & {[0.25 \pm 0.13]} \end{aligned}$ |
| RCWP0550 | $\begin{gathered} 0.055 \pm 0.005 \\ {[1.40 \pm 0.13]} \end{gathered}$ | $\begin{aligned} & 0.050 \pm 0.005 \\ & {[1.27 \pm 0.13]} \end{aligned}$ | $\begin{gathered} 0.020 \pm 0.005 \\ {[0.51 \pm 0.13]} \end{gathered}$ | $\begin{gathered} 0.010 \pm 0.005 \\ {[0.25 \pm 0.13]} \end{gathered}$ | $\begin{aligned} & 0.015 \pm 0.005 \\ & {[0.38 \pm 0.13]} \end{aligned}$ |
| RCWP0575 | $\begin{gathered} 0.080 \pm 0.005 \\ {[2.03 \pm 0.13]} \end{gathered}$ | $\begin{aligned} & 0.050 \pm 0.005 \\ & {[1.27 \pm 0.13]} \end{aligned}$ | $\begin{gathered} 0.020 \pm 0.005 \\ {[0.51 \pm 0.13]} \end{gathered}$ | $\begin{aligned} & 0.015 \pm 0.005 \\ & {[0.38 \pm 0.13]} \end{aligned}$ | $\begin{aligned} & 0.015 \pm 0.005 \\ & {[0.38 \pm 0.13]} \end{aligned}$ |
| RCWP0603 | $\begin{gathered} 0.063 \pm 0.005 \\ {[1.60 \pm 0.13]} \end{gathered}$ | $\begin{gathered} 0.032 \pm 0.005 \\ {[0.81 \pm 0.13]} \end{gathered}$ | $\begin{gathered} 0.018 \pm 0.005 \\ {[0.46 \pm 0.13]} \end{gathered}$ | $\begin{aligned} & 0.012 \pm 0.005 \\ & {[0.31 \pm 0.13]} \end{aligned}$ | $\begin{aligned} & 0.015 \pm 0.005 \\ & {[0.38 \pm 0.13]} \end{aligned}$ |
| RCWP1100 | $\begin{gathered} 0.105 \pm 0.005 \\ {[2.67 \pm 0.13]} \end{gathered}$ | $\begin{aligned} & 0.100 \pm 0.005 \\ & {[2.54 \pm 0.13]} \end{aligned}$ | $\begin{gathered} 0.020 \pm 0.005 \\ {[0.51 \pm 0.13]} \end{gathered}$ | $\begin{aligned} & 0.015 \pm 0.005 \\ & {[0.38 \pm 0.13]} \end{aligned}$ | $\begin{aligned} & 0.015 \pm 0.005 \\ & {[0.38 \pm 0.13]} \end{aligned}$ |
| RCWP1206 | $\begin{gathered} 0.125 \pm 0.005 \\ {[3.18 \pm 0.13]} \end{gathered}$ | $\begin{aligned} & 0.063 \pm 0.005 \\ & {[1.60 \pm 0.13]} \end{aligned}$ | $\begin{gathered} 0.020 \pm 0.005 \\ {[0.51 \pm 0.13]} \end{gathered}$ | $\begin{aligned} & 0.015 \pm 0.005 \\ & {[0.38 \pm 0.13]} \end{aligned}$ | $\begin{aligned} & 0.015 \pm 0.005 \\ & {[0.38 \pm 0.13]} \end{aligned}$ |
| RCWP2010 | $\begin{gathered} 0.197 \pm 0.006 \\ {[5.00 \pm 0.15]} \end{gathered}$ | $\begin{gathered} 0.098 \pm 0.005 \\ {[2.49 \pm 0.13]} \end{gathered}$ | $\begin{gathered} 0.020 \pm 0.005 \\ {[0.51 \pm 0.13]} \end{gathered}$ | $\begin{gathered} 0.020 \pm 0.005 \\ {[0.51 \pm 0.13]} \end{gathered}$ | $\begin{aligned} & 0.020 \pm 0.005 \\ & {[0.51 \pm 0.13]} \end{aligned}$ |
| RCWP2512 | $\begin{gathered} 0.250 \pm 0.006 \\ {[6.35 \pm 0.15]} \end{gathered}$ | $\begin{aligned} & 0.124 \pm 0.005 \\ & {[3.15 \pm 0.13]} \end{aligned}$ | $\begin{gathered} 0.020 \pm 0.005 \\ {[0.51 \pm 0.13]} \end{gathered}$ | $\begin{gathered} 0.020 \pm 0.005 \\ {[0.51 \pm 0.13]} \end{gathered}$ | $\begin{aligned} & 0.020 \pm 0.005 \\ & {[0.51 \pm 0.13]} \end{aligned}$ |
| RCWP5100 | $\begin{gathered} 0.105 \pm 0.005 \\ {[2.67 \pm 0.13]} \end{gathered}$ | $\begin{aligned} & 0.050 \pm 0.005 \\ & {[1.27 \pm 0.13]} \end{aligned}$ | $\begin{gathered} 0.020 \pm 0.005 \\ {[0.51 \pm 0.13]} \end{gathered}$ | $\begin{gathered} 0.015 \pm 0.005 \\ {[0.38 \pm 0.13]} \end{gathered}$ | $\begin{gathered} 0.015 \pm 0.005 \\ {[0.38 \pm 0.13]} \end{gathered}$ |
| RCWP5150 | $\begin{gathered} 0.155 \pm 0.005 \\ {[3.94 \pm 0.13]} \end{gathered}$ | $\begin{aligned} & 0.050 \pm 0.005 \\ & {[1.27 \pm 0.13]} \end{aligned}$ | $\begin{gathered} 0.020 \pm 0.005 \\ {[0.51 \pm 0.13]} \end{gathered}$ | $\begin{gathered} 0.015 \pm 0.005 \\ {[0.38 \pm 0.13]} \end{gathered}$ | $\begin{gathered} 0.015 \pm 0.005 \\ {[0.38 \pm 0.13]} \end{gathered}$ |
| RCWP7225 | $\begin{gathered} 0.230 \pm 0.005 \\ {[5.84 \pm 0.13]} \end{gathered}$ | $\begin{aligned} & 0.075 \pm 0.005 \\ & {[1.91 \pm 0.13]} \end{aligned}$ | $\begin{gathered} 0.020 \pm 0.005 \\ {[0.51 \pm 0.13]} \end{gathered}$ | $\begin{gathered} 0.020 \pm 0.005 \\ {[0.51 \pm 0.13]} \end{gathered}$ | $\begin{aligned} & 0.020 \pm 0.005 \\ & {[0.51 \pm 0.13]} \end{aligned}$ |

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