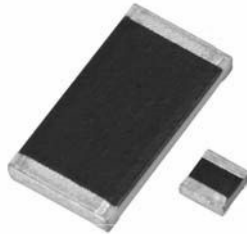


## Thick Film Chip Resistors, Industrial



### FEATURES

- Same materials and construction as MIL-PRF-55342 chip resistors
- Construction is sulfur impervious against a high sulfur environment (ASTM B 809-95 test method)
- 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
- Operating temperature range: - 55 °C to + 150 °C
- For zero ohm jumpers, see Vishay Dale's RCWP Jumper datasheet
- Compliant to RoHS directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition



RoHS\*  
COMPLIANT

HALOGEN  
FREE

MECHANICAL SPECIFICATIONS	
Resistive element	Ruthenium oxide
Encapsulation	Epoxy
Substrate	96 % alumina
Termination	Solder-coated nickel barrier
Solder finish	Pure tin or tin/lead solder alloy

STANDARD ELECTRICAL SPECIFICATIONS							
GLOBAL MODEL	HISTORICAL MODEL	CASE SIZE	POWER RATING <sup>(1)</sup> <i>P</i> <sub>70 °C</sub> W	MAXIMUM WORKING VOLTAGE <sup>(2)</sup> V	RESISTANCE RANGE Ω	TOLERANCE ± %	TEMPERATURE COEFFICIENT ± ppm/°C
RCWP0201	RCWP-0201	0201	0.05	30	10 to 46	5, 10	300
					47 to 1M	1, 2, 5, 10	100, 300
RCWP0502	RCWP-0502	0502	0.05	40	1 to 9.1	2, 5, 10	300
					10 to 22M	1, 2, 5, 10	100, 300
RCWP0302	RCWP-0302	0302	0.04	15	1 to 9.1	2, 5, 10	300
					10 to 22M	1, 2, 5, 10	100, 300
RCWP0402	RCWP-0402	0402	0.05	30	1 to 9.1	2, 5, 10	300
					10 to 22M	1, 2, 5, 10	100, 300
RCWP0603	RCWP-0603	0603	0.10	50	1 to 5.6	2, 5, 10	300
					5.62 to 22M	1, 2, 5, 10	100, 300
RCWP0540	RCWP-540	0504	0.08	40	1 to 9.1	2, 5, 10	300
					10 to 22M	1, 2, 5, 10	100, 300
RCWP0550	RCWP-550	0505	0.125	50	1 to 9.1	2, 5, 10	300
					10 to 22M	1, 2, 5, 10	100, 300
RCWP0575	RCWP-575	0705 <sup>(3)</sup>	0.15	70	1 to 5.6	2, 5, 10	300
					5.62 to 22M	1, 2, 5, 10	100, 300
RCWP5100	RCWP-5100	1005	0.20	100	1 to 5.6	2, 5, 10	300
					5.62 to 22M	1, 2, 5, 10	100, 300
RCWP1206	RCWP-1206	1206	0.25	100	1 to 5.6	2, 5, 10	300
					5.62 to 22M	1, 2, 5, 10	100, 300
RCWP5150	RCWP-5150	1505	0.35	125	1 to 5.6	2, 5, 10	300
					5.62 to 22M	1, 2, 5, 10	100, 300
RCWP1100	RCWP-1100	1010	0.50	100	1 to 5.6	2, 5, 10	300
					5.62 to 22M	1, 2, 5, 10	100, 300
RCWP7225	RCWP-7225	2208	0.60	200	1 to 5.6	2, 5, 10	300
					5.62 to 22M	1, 2, 5, 10	100, 300
RCWP2010	RCWP-2010	2010	0.80	200	1 to 5.6	2, 5, 10	300
					5.62 to 22M	1, 2, 5, 10	100, 300
RCWP2512	RCWP-2512	2512	1.0	200	1 to 5.6	2, 5, 10	300
					5.62 to 22M	1, 2, 5, 10	100, 300

**Notes**

- Consult factory for extended resistance range.
- <sup>(1)</sup> Power rating depends on the maximum temperature at the solder point, the component placement density and the substrate material.
- <sup>(2)</sup> Continuous working voltage shall be  $\sqrt{P \times R}$  or maximum working voltage, whichever is less.
- <sup>(3)</sup> MIL case size 0705 and EIA case size 0805 are dimensionally the same.

\* Pb containing terminations are not RoHS compliant, exemptions may apply

**GLOBAL PART NUMBER INFORMATION**

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

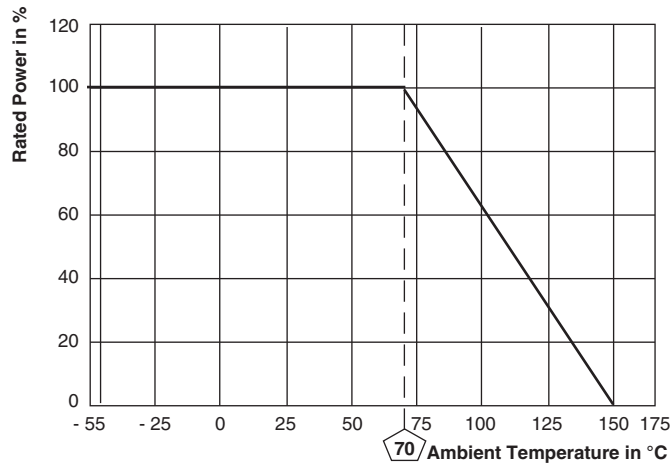
**R** **C** **W** **P** **5** **1** **0** **0** **1** **0** **K** **0** **G** **M** **W** **B**

GLOBAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	TEMPERATURE COEFFICIENT	PACKAGING CODE	SPECIAL
(See Standard Electrical Specifications table)	R = $\Omega$ K = k $\Omega$ M = M $\Omega$ <b>10R0</b> = 10 $\Omega$ <b>1K30</b> = 1.3 k $\Omega$ <b>1M00</b> = 1.0 M $\Omega$ <b>0000</b> = 0 $\Omega$ Jumper	<b>F</b> = $\pm 1\%$ <b>G</b> = $\pm 2\%$ <b>J</b> = $\pm 5\%$ <b>K</b> = $\pm 10\%$ <b>Z</b> = 0 $\Omega$ Jumper	<b>K</b> = 100 ppm <b>M</b> = 300 ppm <b>S</b> = Special, 0 $\Omega$ Jumper	<b>TP</b> = Tin/lead, T/R (full) <b>S3</b> = Tin/lead, T/R (1000 pieces) <b>WB</b> = Tin/lead, tray <b>S2</b> = Tin/lead, T/R (500 pieces) <b>S6</b> = Tin/lead, T/R (300 pieces)  <b>EA</b> = Lead (Pb)-free, T/R (full) <b>EB</b> = Lead (Pb)-free, T/R (1000 pieces) <b>ET</b> = Lead (Pb)-free, tray <b>EC</b> = Lead (Pb)-free, T/R (500 pieces) <b>ED</b> = Lead (Pb)-free, T/R (300 pieces)	Blank = Standard (Dash number) (Up to 2 digits) From <b>1 to 99</b> as applicable 99 = 0 $\Omega$ Jumper

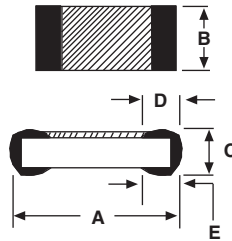
Historical Part Number: RCWP-5100103G (will continue to be accepted)

<b>RCWP-5100</b>	<b>103</b>	<b>G</b>	<b>T03</b>
HISTORICAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING CODE

**DERATING CURVE**



**DIMENSIONS** in inches (millimeters)



GLOBAL MODEL	A (LENGTH)	B (WIDTH)	C (HEIGHT)	D (TOP TERM)	E (BOTTOM TERM)
RCWP0201	0.024 ± 0.002 (0.61 ± 0.05)	0.012 ± 0.002 (0.30 ± 0.05)	0.009 ± 0.002 (0.23 ± 0.05)	0.006 ± 0.003 (0.15 ± 0.08)	0.006 + 0.002 - 0.004 (0.15 + 0.05 - 0.10)
RCWP0302	0.034 ± 0.004 (0.86 ± 0.10)	0.021 ± 0.003 (0.53 ± 0.08)	0.013 ± 0.003 (0.33 ± 0.08)	0.007 ± 0.005 (0.18 ± 0.13)	0.008 ± 0.005 (0.20 ± 0.13)
RCWP0402	0.039 ± 0.003 (0.99 ± 0.08)	0.020 ± 0.003 (0.51 ± 0.08)	0.013 ± 0.003 (0.33 ± 0.08)	0.010 ± 0.005 (0.25 ± 0.13)	0.010 ± 0.005 (0.25 ± 0.13)
RCWP0502	0.055 ± 0.005 (1.40 ± 0.13)	0.023 ± 0.003 (0.58 ± 0.08)	0.015 ± 0.003 (0.38 ± 0.08)	0.010 ± 0.005 (0.25 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWP0540	0.055 ± 0.005 (1.40 ± 0.13)	0.040 ± 0.005 (1.02 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.010 ± 0.005 (0.25 ± 0.13)	0.010 ± 0.005 (0.25 ± 0.13)
RCWP0550	0.055 ± 0.005 (1.40 ± 0.13)	0.050 ± 0.005 (1.27 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.010 ± 0.005 (0.25 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWP0575	0.080 ± 0.005 (2.03 ± 0.13)	0.050 ± 0.005 (1.27 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.016 ± 0.008 (0.41 ± 0.20)	0.015 ± 0.005 (0.38 ± 0.13)
RCWP0603	0.063 ± 0.005 (1.60 ± 0.13)	0.032 ± 0.005 (0.81 ± 0.13)	0.018 ± 0.005 (0.46 ± 0.13)	0.012 ± 0.005 (0.30 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWP1100	0.105 ± 0.005 (2.67 ± 0.13)	0.100 ± 0.005 (2.54 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWP1206	0.125 ± 0.005 (3.18 ± 0.13)	0.063 ± 0.005 (1.60 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWP2010	0.197 ± 0.006 (5.00 ± 0.15)	0.098 ± 0.005 (2.49 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)
RCWP2512	0.250 ± 0.006 (6.35 ± 0.15)	0.124 ± 0.005 (3.15 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)
RCWP5100	0.105 ± 0.005 (2.67 ± 0.13)	0.050 ± 0.005 (1.27 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWP5150	0.155 ± 0.005 (3.94 ± 0.13)	0.050 ± 0.005 (1.27 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWP7225	0.230 ± 0.005 (5.84 ± 0.13)	0.075 ± 0.005 (1.91 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)



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