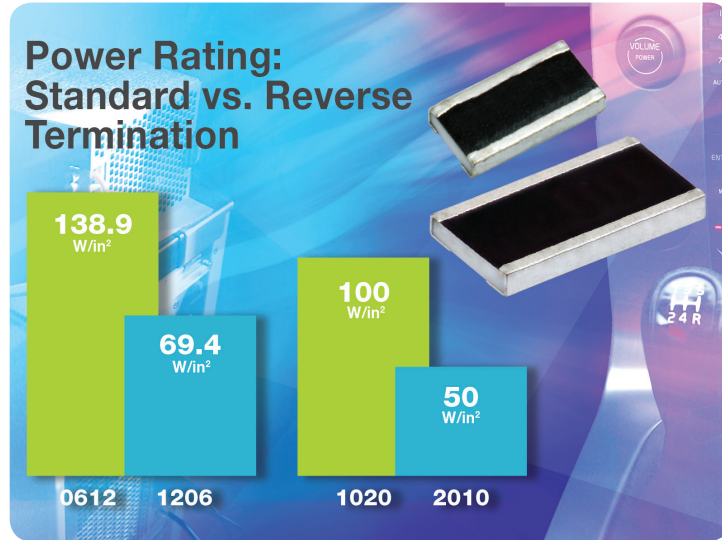


### Thick Film Surface-Mount Chip Resistor, Wraparound, Low Value (0.01 $\Omega$ to 0.976 $\Omega$ )



#### KEY BENEFITS

- Double the power rating for the same footprint
  - RCWE0612 (1 W) vs RCWE1206 (0.5 W)
  - RCWE1020 (2 W) vs RCWE2010 (1 W)
- Improved thermal performance that reduces the effects of thermal expansion (solder joint cracking resulting from thermal cycles) as compared to a standard end terminated 1206 / 2010 chip resistor.
- Low resistance range: 0.01  $\Omega$  to 0.976  $\Omega$

#### APPLICATIONS

- Telecommunications:
  - Power management in cell phones
  - DC/DC converters
- Computer:
  - Disc drive motor control
  - Power management / safety
  - DC/DC converters, VRMs
- Consumer:
  - Air conditioning / heat-pump (inverter control)
  - White goods (inverter control)
- Industrial :
  - Air conditioning / refrigeration (inverter control)

#### RESOURCES

- Datasheet: RCWE - <http://www.vishay.com/doc?20019>
- For technical questions contact [ww2bresistors@vishay.com](mailto:ww2bresistors@vishay.com)
- Material categorization: For definitions of compliance please see <http://www.vishay.com/doc?99912>



RoHS  
COMPLIANT

HALOGEN  
FREE





# THICK FILM RESISTORS

RCWE

## Thick Film Surface-Mount Chip Resistor, Wraparound, Low Value (0.01 Ω to 0.976 Ω)

STANDARD ELECTRICAL SPECIFICATIONS						
GLOBAL MODEL	CASE SIZE	POWER RATING $P_{70^\circ\text{C}}$ W	TEMPERATURE COEFFICIENT $\pm$ ppm/ $^\circ\text{C}$	RESISTANCE RANGE $\Omega$	TOLERANCE $\pm$ %	E-SERIES
RCWE0402	0402	0.125	400	0.033 to 0.05	5.0	24
			200	0.051 to 0.18	1.0, 5.0	24; 96
			100	0.2 to 0.976	0.5, 1.0, 5.0 <sup>(1)</sup>	
RCWE0603	0603	0.2	700	0.010 to 0.018	5.0	24
			400	0.02 to 0.03	1.0, 5.0	24; 96
			200	0.033 to 0.1	1.0, 5.0	
RCWE0805	0805	0.25	100	0.11 to 0.976	0.5, 1.0, 5.0 <sup>(1)</sup>	24; 96
			400	0.010 to 0.018	5.0	
			300	0.02 to 0.03	1.0, 5.0	
RCWE0612	0612	1.0	200	0.033 to 0.05	1.0, 5.0	24; 96
			100	0.051 to 0.976	0.5, 1.0, 5.0 <sup>(1)</sup>	
			300	0.010 to 0.016	2.0, 5.0	
RCWE1206	1206	0.5	200	0.018 to 0.2	2.0, 5.0	24; 96
			100	0.205 to 0.976	1.0, 5.0	
			600	0.010 to 0.018	5.0	
RCWE1210	1210	1.0	300	0.02 to 0.03	1.0, 5.0	24; 96
			200	0.033 to 0.05	1.0, 5.0	
			100	0.051 to 0.976	0.5, 1.0, 5.0 <sup>(1)</sup>	
RCWE1020	1020	2.0	200	0.010 to 0.016	2.0, 5.0	24
			100	0.0162 to 0.976	1.0, 5.0	24; 96
RCWE2010	2010	1.0	600	0.010 to 0.018	5.0	24
			300	0.02 to 0.03	1.0, 5.0	24; 96
			200	0.033 to 0.05	1.0, 5.0	
RCWE2512	2512	2.0	100	0.051 to 0.976	0.5, 1.0, 5.0 <sup>(1)</sup>	24; 96
			600	0.010 to 0.018	5.0	
			300	0.02 to 0.03	1.0, 5.0	
			200	0.033 to 0.05	1.0, 5.0	
			100	0.051 to 0.976	0.5, 1.0, 5.0 <sup>(1)</sup>	

**Notes**

- Power rating depends on the max. temperature at the solder point, the component placement density and the substrate material.
- Part marking: Reference "Surface Mount Resistor Marking" (document number 20020).
- <sup>(1)</sup> Tight tolerance of 0.5 % is available for resistance values above 0.200 Ω.

**GLOBAL PART NUMBER INFORMATION**

Global Part Numbering example: RCWE060351L0FN EA (visit [www.vishay.net](http://www.vishay.net) Vishay Dale parts numbering manual for all options)

R C W E 0 6 0 3 5 1 L 0 F N E A

GLOBAL MODEL  
(8 digits)

- RCWE0402
- RCWE0603
- RCWE0805
- RCWE0612
- RCWE1206
- RCWE1210
- RCWE1020
- RCWE2010
- RCWE2512

VALUE  
(4 digits)

- L = mΩ \*
- R = decimal
- 10L0 = 0.01 Ω
- R470 = 0.47 Ω
- Note:  
\* Use "L" for resistance values < 0.1 Ω

TOLERANCE  
(1 digit)

- D = ± 0.5 %
- F = ± 1.0 %
- G = ± 2.0 %
- J = ± 5.0 %

TCR  
(1 digit)

- K = ± 100 ppm/ $^\circ\text{C}$
- N = ± 200 ppm/ $^\circ\text{C}$
- M = ± 300 ppm/ $^\circ\text{C}$
- Q = ± 400 ppm/ $^\circ\text{C}$
- P = ± 500 ppm/ $^\circ\text{C}$
- T = ± 600 ppm/ $^\circ\text{C}$
- G = ± 700 ppm/ $^\circ\text{C}$

PACKAGING  
(2 digits)

EA = lead (Pb)-free, tape/reel

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