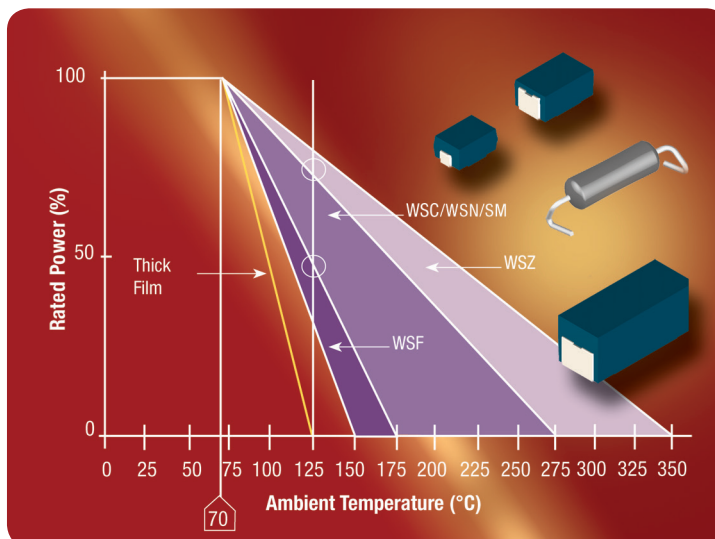




# HIGH-POWER SURFACE-MOUNT RESISTORS

Vishay Dale

## WSC/WSF/WSN/WSZ/SM Resistors Offer Higher Power Ratings at Elevated Temperatures vs. Other Technologies



### KEY BENEFITS

- A wide range of package sizes (2012 to 7532)
- A wide resistance range (0.1  $\Omega$  to 100 k $\Omega$ )
- High-temperature performance (up to 350 °C)
- Tight tolerances (down to  $\pm 0.1$  %)
- Low temperature coefficients (down to  $\pm 20$  ppm/°C)
- Excellent overload capability
- Non-inductive WSC available (WSN family)

### APPLICATIONS

- Instrumentation
- DC/DC converters
- Voltage divider circuits
- Automotive controls: engine control modules, body electronics, and powertrain
- Satellite receivers
- Motor controls
- Pulsing applications
- Switching systems
- Telecommunications: networking, line cards

### RESOURCES

- For technical questions contact [ww2bresistors@vishay.com](mailto:ww2bresistors@vishay.com)
- Sales contacts: <http://www.vishay.com/doc?99914>

Resistors - Wide Range of Package Sizes

One of the World's Largest Manufacturers of  
Discrete Semiconductors and Passive Components





# HIGH-POWER SURFACE-MOUNT RESISTORS

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Resistors - Wide Range of Package Sizes

Global Model and Wattle Rating	Resistance Range	RTC (ppm/°C)	Tolerance	Dimensions	Technology
<b>WSC/WSN01/2 0.5 W</b> 	0.1 Ω to 0.99 Ω 1.0 Ω to 4.99 Ω*	± 90 ± 50	± 0.5 %, ± 1.0 %, ± 5.0 %	L = 0.200 in [5.08 mm] W = 0.125 in [3.18 mm] H = 0.096 in [2.44 mm]	Wirewound
<b>WSC/WSN2515 1.0 W</b> 	0.1 Ω to 0.3 Ω 0.31 Ω to 0.99 Ω 1 Ω to 26.5 Ω 26.51 Ω to 2.5 kΩ*	± 150 ± 90 ± 50 ± 20	± 0.5 %, ± 1 %, ± 5 % ± 0.1 %, ± 0.25 %, ± 0.5 %, ± 1 %, ± 5 % ± 0.1 %, ± 0.25 %, ± 0.5 %, ± 1 %, ± 5 % ± 0.1 %, ± 0.25 %, ± 0.5 %, ± 1 %, ± 5 %	L = 0.250 in [6.35 mm] W = 0.150 in [3.81 mm] H = 0.110 in [2.79 mm]	Wirewound
<b>WSC/WSN4527 2.0 W</b> 	0.1 Ω to 0.30 Ω 0.31 Ω to 0.99 Ω 1.0 Ω to 9.99 Ω 10 Ω to 4.92 kΩ*	± 150 ± 90 ± 50 ± 20	± 0.5 %, ± 1.0 %, ± 5.0 %	L = 0.455 in [11.56 mm] W = 0.275 in [6.98 mm] H = 0.167 in [4.24 mm]	Wirewound
<b>WSC/WSN6927 3.0 W</b> 	0.1 Ω to 0.30 Ω 0.31 Ω to 0.99 Ω 1.0 Ω to 9.99 Ω 10 Ω to 8 kΩ*	± 150 ± 90 ± 50 ± 20	± 0.5 %, ± 1.0 %, ± 5.0 %	L = 0.690 in [17.53 mm] W = 0.275 in [6.98 mm] H = 0.280 in [7.11 mm]	Wirewound
<b>WSF2012 0.5 W</b> 	5.0 Ω to 1.43 kΩ	± 100 ± 50 ± 25	± 0.5 %, ± 1.0 %, ± 5.0 %	L = 0.200 in [5.08 mm] W = 0.125 in [3.18 mm] H = 0.096 in [2.44 mm]	Metal Film
<b>WSF2515 1.0 W</b> 	10 Ω to 10 kΩ	± 100 ± 50 ± 25	± 0.5 %, ± 1.0 %, ± 5.0 %	L = 0.250 in [6.35 mm] W = 0.150 in [3.81 mm] H = 0.110 in [2.79 mm]	Metal Film
<b>WSF4527 2.0 W</b> 	10 Ω to 100 kΩ	± 100 ± 50 ± 25	± 0.5 %, ± 1.0 %, ± 5.0 %	L = 0.455 in [11.56 mm] W = 0.275 in [6.98 mm] H = 0.167 in [4.24 mm]	Metal Film
<b>WSZ6720 1.8 W</b> 	1 Ω to 510 Ω 0.22 Ω to 510 Ω 0.1 Ω to 510 Ω 24 Ω to 3.3 kΩ 1.8 Ω to 3.3 kΩ	- 10...- 80 ppm/K - 10...- 80 ppm/K - 10...- 80 ppm/K 100...180 ppm/K 100...180 ppm/K	± 1 % ± 2 % ± 5 %, ± 10 % ± 5 % ± 10 %	L = 0.67 in [17.0 mm] W = 0.20 in [5.0 mm] H = 0.237 in [6.0 mm]	Wirewound
<b>WSZ7532 3.75 W</b> 	1 Ω to 9.99 Ω 10 Ω to 15 kΩ	± 50 ± 30	± 5 %, ± 10 % ± 1 %, ± 3 %, ± 5 %, ± 10 %	L = 0.782 in [19.86 mm] W = 0.322 in [8.18 mm] H = 0.350 in [8.89 mm]	Wirewound
<b>CPSM03 3 W</b> <b>CPSM05 5 W</b> 	0.1 Ω to 0.99 Ω 1 Ω to 1 kΩ	± 600 ± 300	± 5 %, ± 10 %	<b>CPSM03</b> L = 0.906 in [23.01 mm] W = 0.374 in [9.5 mm] H = 0.454 in [11.53 mm] <b>CPSM05</b> L = 1.06 in [26.92 mm] W = 0.374 in [9.5 mm] H = 0.454 in [11.53 mm]	Wirewound
<b>SM-1, SM-1...NI 0.5 W</b> <b>SM-2, SM-2...NI 1 W</b> <b>SM-3, SM-3...NI 3 W</b> <b>SM-4, SM-4...NI 2 W</b> <b>SM-5, SM-5...NI 4 W</b> 	0.1 to 400 Ω 0.1 to 3 kΩ 0.1 to 25 kΩ 0.1 to 15 kΩ 0.1 to 50 kΩ	± 20 > 10 Ω ± 50 1 Ω to 10 Ω contact factory for 0.99 Ω and below	± 0.1 % ± 0.25 % ± 0.5 % ± 1 % ± 5 %	<b>min. size:</b> <b>SM-1, SM-1...NI</b> L = 0.19 in [4.83 mm] W = 0.13 in [3.30 mm] H = 0.11 in [2.79 mm] <b>max. size:</b> <b>SM-5, SM-5...NI</b> L = 0.82 in [20.83 mm] W = 0.295 in [7.49 mm] H = 0.305 in [7.76 mm]	Wirewound

\* WSN maximum resistance is 1/2 that of the WSC.