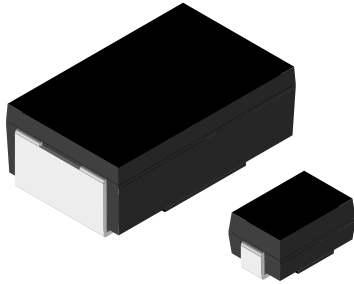


Wirewound Resistors, Precision Power, Surface Mount



FEATURES

- All welded construction
- Molded encapsulation
- Wraparound terminations
- Excellent stability at different environmental conditions
- High power ratings (up to 3 W)
- Superior surge capability
- Available in non-inductive styles with Aryton-Perry winding (WSN in lieu of WSC, maximum resistance is one-half WSC range)



RoHS*
COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS						
GLOBAL MODEL	HISTORICAL MODEL	SIZE INCH	POWER RATING $P_{70^\circ\text{C}}$ W	TOLERANCE $\pm\%$	RESISTANCE RANGE Ω	ENCAPSULATION
WSC01/2	WSC-1/2	2012	0.5	0.5, 1, 5	0.1 - 4.99	Epoxy
WSC0001	WSC-1	2515	1.0	0.5, 1, 5	0.1 - 2.77K	Epoxy
WSC2515	WSC2515	2515	1.0	0.5, 1, 5 ¹⁾	0.1 - 2.77K	Thermoplastic
WSC0002	WSC-2	4527	2.0	0.5, 1, 5	0.1 - 4.92K	Epoxy
WSC4527	WSC4527	4527	2.0	0.5, 1, 5	0.1 - 4.92K	Thermoplastic
WSC6927	WSC6927	6927	3.0	0.5, 1, 5	0.1 - 8K	Thermoplastic

Note

- Part Marking: 1/2 W - DALE, Value; 1 W - Model, Value, Tolerance, Date Code; 2 W & 3 W - DALE, Model, Value, Tolerance, Date Code
- 1) 0.1 % and 0.25 % is available on the WSC2515 for 0.499 Ω to 2.5 k Ω range.

TECHNICAL SPECIFICATIONS						
PARAMETER	UNIT	WSC01/2	WSC0001	WSC2515	WSC0002	WSC4527/WSC6927
Temperature Coefficient	ppm/ $^\circ\text{C}$	0.1 Ω - 0.99 Ω = ± 90 1.0 Ω - 4.99 Ω = ± 50	0.1 Ω - 0.99 Ω = ± 90 1.0 Ω - 26.5 Ω = ± 50 26.51 Ω and above = ± 20	0.1 Ω - 0.3 Ω = ± 150 0.31 Ω - 0.99 Ω = ± 90 1.0 Ω - 26.5 Ω = ± 50 26.51 Ω and above = ± 20	0.1 Ω - 0.99 Ω = ± 90 1.0 Ω - 9.9 Ω = ± 50 10.0 Ω and above = ± 20	0.1 Ω - 0.3 Ω = ± 150 0.31 Ω - 0.99 Ω = ± 90 1.0 Ω - 9.9 Ω = ± 50 10 Ω and above = ± 20
Dielectric Withstanding Voltage	V_{AC}	> 500	> 500	> 500	> 500	> 500
Insulation Resistance	Ω	> 10^9	> 10^9	> 10^9	> 10^9	> 10^9
Operating Temperature Range	$^\circ\text{C}$	- 65/+ 175	- 65/+ 175	- 65/+ 275	- 65/+ 175	- 65/+ 275
Maximum Working Voltage	V	$(P \times R)^{1/2}$	$(P \times R)^{1/2}$	$(P \times R)^{1/2}$	$(P \times R)^{1/2}$	$(P \times R)^{1/2}$
Weight/1000 pieces (typical)	g	90	165	165	760	760/1675

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: WSC2515R7000FEA (preferred part numbering format)

W	S	C	2	5	1	5	R	7	0	0	0	F	E	A		
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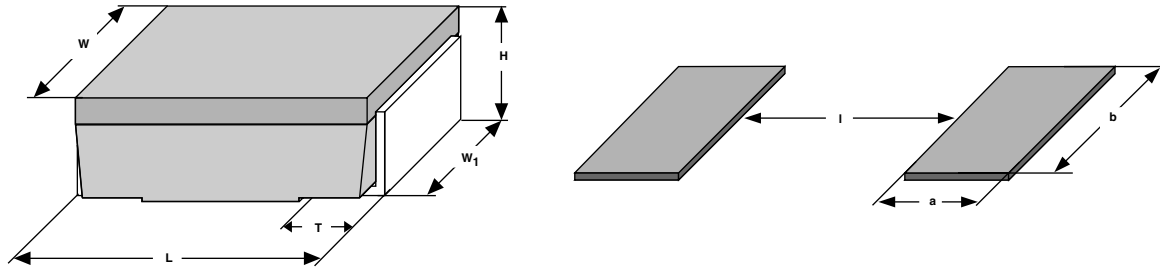
GLOBAL MODEL	SIZE	VALUE	TOLERANCE	PACKAGING	SPECIAL
WSC WSN	01/2 0001 2515 0002 4527 6927	R = decimal K = thousand 54R15 = 54.15 Ω 1K500 = 1.5 k Ω	B = $\pm 0.1\%$ ²⁾ C = $\pm 0.25\%$ ²⁾ D = $\pm 0.5\%$ F = $\pm 1.0\%$ G = $\pm 2.0\%$ H = $\pm 3.0\%$ J = $\pm 5.0\%$ K = $\pm 10\%$	EA = Lead (Pb)-free, tape/reel EK = Lead (Pb)-free, bulk TA = Tin/Lead, Tape/reel (R86) BA = Tin/Lead, bulk (B43)	(Dash Number) (up to 2 digits) From 1-99 as applicable

Historical Part Number example: WSC2515 0.7 Ω 1% R86 (will continue to be accepted)

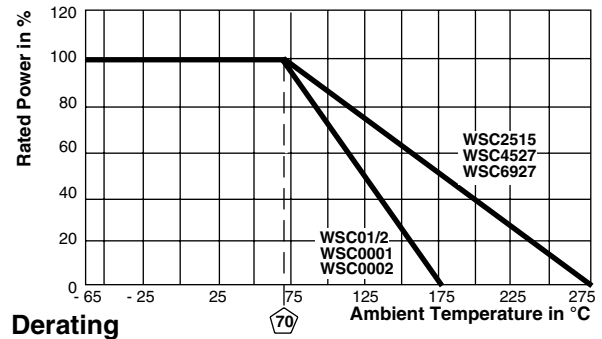
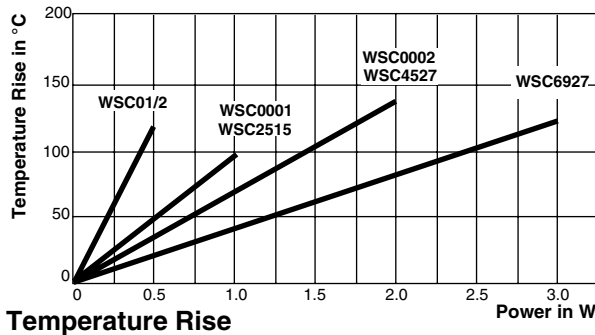
WSC2515	0.7 Ω	1%	R86
HISTORICAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING

Note

- 2) WSC2515 only
- * Pb containing terminations are not RoHS compliant, exemptions may apply

DIMENSIONS


MODEL	DIMENSIONS in inches [millimeters]					SOLDER PAD DIMENSIONS in inches [millimeters]		
	L	H	T	W	W ₁	a	b	l
WSC01/2	0.200 ± 0.020 [5.08 ± 0.508]	0.096 ± 0.015 [2.44 ± 0.381]	0.040 ± 0.010 [1.02 ± 0.254]	0.125 ± 0.005 [3.18 ± 0.127]	0.050 ± 0.010 [1.27 ± 0.254]	0.085 [2.16]	0.070 [1.78]	0.080 [2.03]
WSC0001	0.250 ± 0.020 [6.35 ± 0.508]	0.110 ± 0.015 [2.79 ± 0.381]	0.045 ± 0.010 [1.14 ± 0.254]	0.150 ± 0.005 [3.81 ± 0.127]	0.098 ± 0.005 [2.49 ± 0.127]	0.090 [2.29]	0.115 [2.92]	0.120 [3.05]
WSC2515	0.250 ± 0.020 [6.35 ± 0.508]	0.110 ± 0.015 [2.79 ± 0.381]	0.045 ± 0.010 [1.14 ± 0.254]	0.150 ± 0.005 [3.81 ± 0.127]	0.098 ± 0.005 [2.49 ± 0.127]	0.090 [2.29]	0.115 [2.92]	0.120 [3.05]
WSC0002	0.445 ± 0.032 [11.30 ± 0.813]	0.162 ± 0.015 [4.11 ± 0.381]	0.100 ± 0.010 [2.54 ± 0.254]	0.275 ± 0.005 [6.98 ± 0.127]	0.215 ± 0.005 [5.46 ± 0.127]	0.155 [3.94]	0.230 [5.84]	0.205 [5.21]
WSC4527	0.455 ± 0.020 [11.56 ± 0.508]	0.167 ± 0.010 [4.24 ± 0.254]	0.100 ± 0.010 [2.54 ± 0.254]	0.275 ± 0.005 [6.98 ± 0.127]	0.215 ± 0.005 [5.46 ± 0.127]	0.155 [3.94]	0.230 [5.84]	0.205 [5.21]
WSC6927	0.690 ± 0.032 [17.53 ± 0.813]	0.280 ± 0.015 [7.11 ± 0.381]	0.100 ± 0.010 [2.54 ± 0.254]	0.275 ± 0.005 [6.98 ± 0.127]	0.215 ± 0.015 [5.46 ± 0.381]	0.155 [3.94]	0.235 [5.97]	0.470 [11.94]



PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Thermal Shock	- 55 °C to + 150 °C, 1000 cycles, 15 minutes at each extreme	± (0.5 % + 0.05 Ω) ΔR
Short Time Overload	5 x rated power for 5 seconds	± (0.2 % + 0.05 Ω) ΔR
Low Temperature Storage	- 65 °C for 24 hours	± (0.2 % + 0.05 Ω) ΔR
High Temperature Exposure	1000 hours at + 275 °C (+ 175 °C for WSC01/2, WSC0001 and WSC0002)	± (0.5 % + 0.05 Ω) ΔR
Bias Humidity	+ 85 °C, 85 % RH, 10 % Bias, 1000 hours	± (0.2 % + 0.05 Ω) ΔR
Mechanical Shock	100 g's for 11 milliseconds, 5 pulses	± (0.1 % + 0.05 Ω) ΔR
Vibration	Frequency varied 10 to 500 Hz in one minute, 3 directions, 9 hours	± (0.1 % + 0.05 Ω) ΔR
Load Life	1000 hours at rated power, + 70 °C, 1.5 hours "ON", 0.5 hours "OFF"	± (1.0 % + 0.05 Ω) ΔR
Resistance to Solder Heat	+ 260 °C Solder, 10 - 12 second dwell, 25 mm/second emergence	± (0.5 % + 0.05 Ω) ΔR

PACKAGING				
MODEL	REEL			
	TAPE WIDTH	DIAMETER	PIECES/REEL	CODE
WSC01/2	12 mm/Embossed Plastic	330 mm/13"	2000	EA/TA
WSC0001/WSC2515	16 mm/Embossed Plastic	330 mm/13"	2000	EA/TA
WSC0002/WSC4527	24 mm/Embossed Plastic	330 mm/13"	1200	EA/TA
WSC6927	32 mm/Embossed Plastic	330 mm/13"	725	EA/TA

Note

- Embossed Carrier Tape per EIA-481-1, 2, 3



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