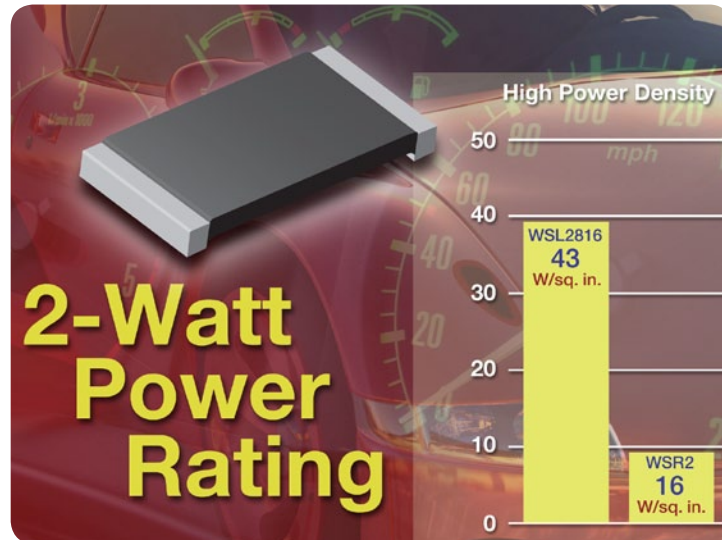


## 2 W Surface-Mount Power Metal Strip® Resistor



### KEY BENEFITS

- Extremely low resistance values of 10 mΩ to 100 mΩ
- Low-TCR element (< 20 ppm/°C) results in accurate current sensing with 1 % tolerance (0.5 % tolerance available), allowing the use of lower cost ICs and enabling maximum performance
- Enables use of a single low-value resistor instead of multiple high-value resistors in parallel
- Can replace larger low-value resistors
- Available in either lead (Pb)-free or tin/lead terminal finish

### APPLICATIONS

- Computer
- Automotive
- Telecommunications
- Consumer
- Industrial

### RESOURCES

- Datasheet: WSL2816 - <http://www.vishay.com/doc?30100>
- For technical questions contact [ww2bresistors@vishay.com](mailto:ww2bresistors@vishay.com)



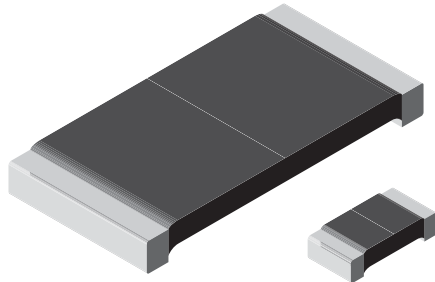


# POWER METAL STRIP® RESISTORS

WSL2816



## 2 W Surface-Mount Power Metal Strip® Resistor



### FEATURES

- Ideal for all types of current sensing, voltage division and pulse applications including switching and linear power supplies, instruments, power amplifiers
- Proprietary processing technique produces extremely low resistance values (down to 0.0005 Ω)
- All welded construction
- Solderable terminations
- Very low inductance 0.5 nH to 5 nH
- Excellent frequency response to 50 MHz
- Low thermal EMF (< 3 μV/°C)
- Solid metal nickel-chrome or manganese-copper alloy resistive element with low TCR (< 20 ppm/°C)
- AEC-Q200 qualified available
- Compliant to RoHS Directive 2002/95/EC

AUTOMOTIVE GRADE Available



RoHS\* COMPLIANT

GREEN (S-2008)\*\* Available

### Notes

- \* Pb containing terminations are not RoHS compliant, exemptions may apply
- \*\* Please see document "Vishay Material Category Policy": [www.vishay.com/doc?99902](http://www.vishay.com/doc?99902)

STANDARD ELECTRICAL SPECIFICATIONS						
GLOBAL MODEL	SIZE	POWER RATING $P_{70^{\circ}\text{C}}$ W	RESISTANCE VALUE RANGE Ω		WEIGHT (typical) g/1000 pieces	
			Tol. ± 0.5 %	Tol. ± 1.0 %		
WSL0603	0603	0.1	0.01 to 0.1	0.01 to 0.1	1.9	
WSL0805	0805	0.125	0.005 to 0.2	0.005 to 0.2	4.8	
WSL1206	1206	0.25	0.005 to 0.2	0.001 to 0.2	16.2	
WSL2010	2010	0.5	0.004 to 0.5	0.001 to 0.5	38.9	
WSL2512	2512	1.0 <sup>(1)</sup>	0.003 to 0.5	0.0005 to 0.5	63.6	
WSL2816	2816	2.0	0.01 to 0.1	0.01 to 0.1	118	

### Notes

- Part marking: Value; tolerance: Due to resistor size limitations some resistors will be marked with only the resistance value.
- <sup>(1)</sup> For values above 0.1 Ω derate linearly to 80 % rated power at 0.5 Ω.

TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	WSL RESISTOR CHARACTERISTICS
Temperature coefficient	ppm/°C	± 400 for 0.5 mΩ to 0.99 mΩ, ± 275 for 1 mΩ to 2.9 mΩ, ± 150 for 3 mΩ to 4.9 mΩ ± 110 for 5 mΩ to 6.9 mΩ, ± 75 for 7 mΩ to 0.5 Ω
Operating temperature range	°C	- 65 to + 170
Maximum working voltage	V	$(P \times R)^{1/2}$

GLOBAL PART NUMBER INFORMATION					
Global Part Numbering example: WSL25124L000FTA					
W	S	L	2	5	1 2 4 L 0 0 0 F T A
GLOBAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING CODE		SPECIAL
WSL0603 WSL0805 WSL1206 WSL2010 WSL2512 WSL2816	L = mΩ* R = Decimal 5L000 = 0.005 Ω R0100 = 0.01 Ω * Use "L" for resistance values < 0.01 Ω	D = ± 0.5 % F = ± 1.0 % J = ± 5.0 %	EA = Lead (Pb)-free, tape/reel EH = Lead (Pb)-free, tape/reel (WSL2816) EK = Lead (Pb)-free, bulk TA = Tin/lead, tape/reel (R86) TG = Tin/lead, tape/reel (RT1, for WSL0603 and WSL0805) TH = Tin/lead, tape/reel (R82, WSL2816) BA = Tin/lead, bulk (B43)		(Dash number) (up to 2 digits) From 1 to 99 as applicable
Historical Part Numbering example: WSL2512 0.004 Ω 1 % R86					
WSL2512	0.004 Ω	1 %	R86		
HISTORICAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING		

Revision 09-Sep-11

Resistors - 2 W Power Rating