

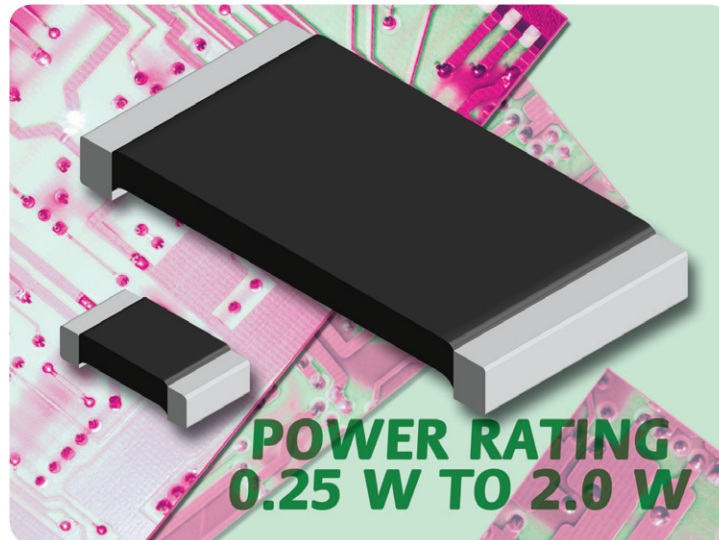


# POWER METAL STRIP® RESISTORS

## WSL...18 High Power



### High Power, Surface-Mount, Power Metal Strip® Resistors



#### KEY BENEFITS

- Four industry standard sizes: 0805, 1206, 2010, and 2512
- Resistance range: 0.001  $\Omega$  to 0.5  $\Omega$
- High power current sensing: double the power to package size compared to standard WSL products
- Temperature coefficient: from  $\pm 75$  ppm/ $^{\circ}\text{C}$  to  $\pm 275$  ppm/ $^{\circ}\text{C}$  according to size and resistance value
- Excellent frequency response
- Available on tape and reel for auto-insertion

#### APPLICATIONS

- Computer: DC/DC converters, VRMs, and power management
- Automotive: electronic controls (engine controls, audio electronics, climate controls, anti-lock brakes, etc.)
- Telecommunications: power management, DC/DC converters

#### RESOURCES

- Datasheet: WSL...18 High Power - <http://www.vishay.com/doc?31057>
- For technical questions contact [ww2bresistors@vishay.com](mailto:ww2bresistors@vishay.com)

Resistors - High-Power Rating up to 2 W

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



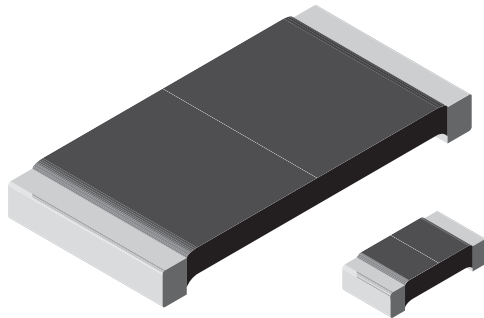


# POWER METAL STRIP® RESISTORS

## WSL...18 High Power



### High Power, Surface-Mount, Power Metal Strip® Resistors



#### 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)
- Specially selected and stabilized materials allow for high power ratings (2 x standard WSL rating)
- All welded construction
- Solderable terminations
- Very low inductance 0.5 nH to 5 nH
- Excellent frequency response to 50 MHz
- Solid metal nickel-chrome or manganese-copper alloy resistive element with low TCR (< 20 ppm/°C)
- Low thermal EMF (< 3 μV/°C)
- AEC-Q200 qualified available
- Compliant to RoHS Directive 2002/95/EC



RoHS\* COMPLIANT

GREEN (5-2008)\*\* 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 $P_{70}^{\circ C}$ W	RESISTANCE VALUE RANGE Ω		WEIGHT (typical) g/1000 pieces
			Tol. ± 0.5 %	Tol. ± 1.0 %	
WSL0603...18	0603	0.20	0.01 to 0.1	0.01 to 0.1	1.9
WSL0805...18	0805	0.25	0.005 to 0.2	0.005 to 0.2	4.8
WSL1206...18	1206	0.5	0.005 to 0.2	0.001 to 0.2	16.2
WSL2010...18	2010	1.0	0.004 to 0.5	0.001 to 0.5	38.9
WSL2512...18	2512	2.0	0.003 to 0.04	0.0005 to 0.04	63.6

#### Note

- Part marking: Value; tolerance: Due to resistor size limitations some resistors will be marked with only the resistance value.

TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	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: WSL25124L000FTA18				
W	S	L	2	5
1	2	4	L	0
0	0	F	T	A
1	8			
GLOBAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING CODE	SPECIAL
WSL0603 WSL0805 WSL1206 WSL2010 WSL2512	L = mΩ* R = Decimal 5L000 = 0.005 Ω R0100 = 0.01 Ω	D = ± 0.5 % F = ± 1.0 % J = ± 5.0 %	EA = Lead (Pb)-free, tape/reel EK = Lead (Pb)-free, bulk TA = Tin/lead, tape/reel (R86) TG = Tin/lead, tape/reel (RT1, for WSL0603 and WSL0805) BA = Tin/lead, bulk (E43)	18 = "High power" option
* Use "L" for resistance values < 0.01 Ω				
Historical Part Numbering example: WSL2512-18 0.004 Ω 1 % R86				
WSL2512-18	0.004 Ω	1 %	R86	
HISTORICAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING CODE	

Revision 09-Sep-11

Resistors - High-Power Rating up to 2 W