



POWER METAL STRIP® RESISTORS

WSL1020

Power Metal Strip® Resistors, Wide Terminal, Low Value (0.003 Ω to 0.006 Ω), Surface-Mount



KEY BENEFITS

- Wide side terminal construction yields high power-to-footprint size ratio (2 W) in 1020 package
- Very low resistance values (0.003 Ω to 0.006 Ω)

APPLICATIONS

Automotive:

- Electronic controls (engine controls, climate controls, anti-lock brakes, etc.)
- Brushless DC motor controls (electronic power steering, electric – water pump / oil pump / air-conditioning, etc.)
- Electric and hybrid controls (battery management)

Computer:

- DC/DC converter, VRMs for servers
- Li-Ion battery management / safety

Industrial:

- Oil / gas well drilling (down hole test / measurement equipment)
- Air-conditioning / heat pump (inverter control)

Consumer:

- Air-conditioning / heat pump (inverter control)
- White goods (inverter control)

RESOURCES

- Datasheet: WSL1020 - www.vishay.com/doc?30183
- For technical questions contact ww2bresistors@vishay.com
- Material categorization: For definitions of compliance please see <http://www.vishay.com/doc?99912>



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COMPLIANT **[5-2008]**

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

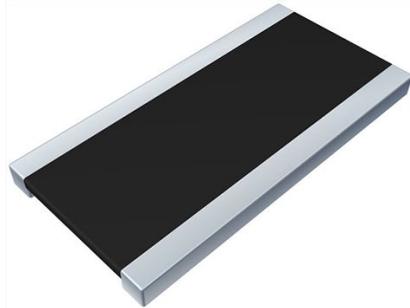


Resistors - Wide Side Terminal Construction

POWER METAL STRIP® RESISTORS

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FEATURES

- Wide side terminal construction that yields high power to foot print size ratio (2 W in 1020 package)
- Ideal for all types of current sensing and pulse applications including switching and linear power supplies, instruments, power amplifiers and shunts
- Proprietary processing technique produces low resistance values (down to 0.003 Ω)
- All welded construction
- Solid metal nickel-chrome alloy resistive element with low TCR (< 20 ppm/°C over temperature range of 20 °C to 60 °C)
- Very low inductance, 0.5 nH to 5 nH
- Excellent frequency response to 50 MHz
- Low thermal EMF (< 3 μV/°C)

STANDARD ELECTRICAL SPECIFICATIONS					
GLOBAL MODEL	SIZE	POWER RATING $P_{70^{\circ}\text{C}}$ W	TOLERANCE ± %	RESISTANCE VALUE RANGE Ω	WEIGHT (typical) g/1000 pieces
WSL1020	1020	2	0.5, 1.0, 5.0	3m to 6m	38.74

TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Temperature coefficient - Resistor	ppm/°C	±175
Temperature coefficient - Element material	ppm/°C	< 20
Operating temperature range	°C	-65 to +170
Maximum working voltage	V	$(P \times R)^{1/2}$

GLOBAL PART NUMBER INFORMATION															
Global Part Numbering: WSL10206L000FEA															
W	S	L	1	0	2	0	6	L	0	0	0	F	E	A	
GLOBAL MODEL (7 digits) WSL1020			RESISTANCE VALUE (5 digits) L = mΩ* 3L000 = 0.003 Ω 4L000 = 0.004 Ω 5L000 = 0.005 Ω 6L000 = 0.006 Ω * Use "L" for resistance values < 0.01 Ω				TOLERANCE CODE (1 digit) D = ±0.5 % F = ±1.0 % J = ±5.0 %		PACKAGING CODE (2 digits) EA = Lead (Pb)-free, tape/reel EK = Lead (Pb)-free, bulk			SPECIAL (up to 2 digits) (Dash number) From 1 to 99 as applicable			

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