



POWER METAL STRIP® RESISTORS

WSL0612

Power Metal Strip® Resistors, Wide Terminal, Low Value (Down to 0.001 Ω), Surface-Mount



KEY BENEFITS

- Wide side terminal construction yields high power-to-footprint size ratio (1 W in 0612 package)
- Very low resistance values (0.001 Ω to 0.003 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 and measurement equipment)
- Air-conditioning / heat pump (inverter control)

Consumer :

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

RESOURCES

- Datasheet: WSL0612 - www.vishay.com/doc?30183
- Material categorization: For definitions please see www.vishay.com/doc?99912
- For technical questions contact - ww2bresistors@vishay.com



RoHS
COMPLIANT

HALOGEN
FREE
Available

GREEN
(5-2008)
Available

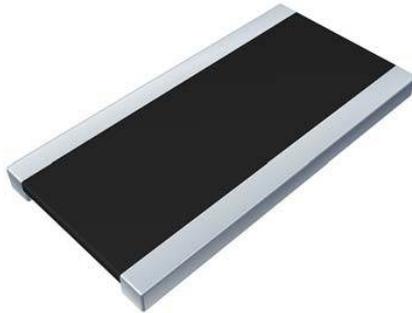
A WORLD OF
SOLUTIONS



POWER METAL STRIP® RESISTORS

WSL0612

Power Metal Strip® Resistors, Wide Terminal, Low Value (Down to 0.001 Ω), Surface-Mount



FEATURES

- Wide side terminal construction that yields high power to foot print size ratio (2 W in 2010 and 1 W in 0612 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 0.001 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)
- AEC-Q200 qualified available ⁽¹⁾
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



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Note

⁽¹⁾ Flame retardance test may not be applicable to some resistor technologies.

STANDARD ELECTRICAL SPECIFICATIONS					
GLOBAL MODEL	SIZE	POWER RATING $P_{70^\circ\text{C}}$ W	TOLERANCE ± %	RESISTANCE VALUE RANGE Ω	WEIGHT (typical) g/1000 pieces
WSL0612	0612	1	1.0, 5.0	1m to 3m	8.5
WSL1020	1020	2	0.5, 1.0, 5.0	3m to 6m	38.74

TECHNICAL SPECIFICATIONS			
PARAMETER	UNIT	RESISTOR CHARACTERISTICS	
		WSL0612	WSL1020
Temperature coefficient - Resistor	ppm/°C	0 to -275 for 1 mΩ 0 to -225 for 2 mΩ 0 to -150 for 3 mΩ	± 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)			RESISTANCE VALUE (5 digits)					TOLERANCE CODE (1 digit)		PACKAGING CODE (2 digits)			SPECIAL (up to 2 digits)			
WSL0612 WSL1020			L = mΩ* 1L000 = 0.001 Ω 2L000 = 0.002 Ω 3L000 = 0.003 Ω 4L000 = 0.004 Ω 5L000 = 0.005 Ω 6L000 = 0.006 Ω * Use "L" for resistance values < 0.01 Ω					D = ± 0.5 % F = ± 1.0 % J = ± 5.0 %		EA = Lead (Pb)-free, tape/reel EK = Lead (Pb)-free, bulk			(Dash number) From 1 to 99 as applicable			

Revision 15-Apr-15