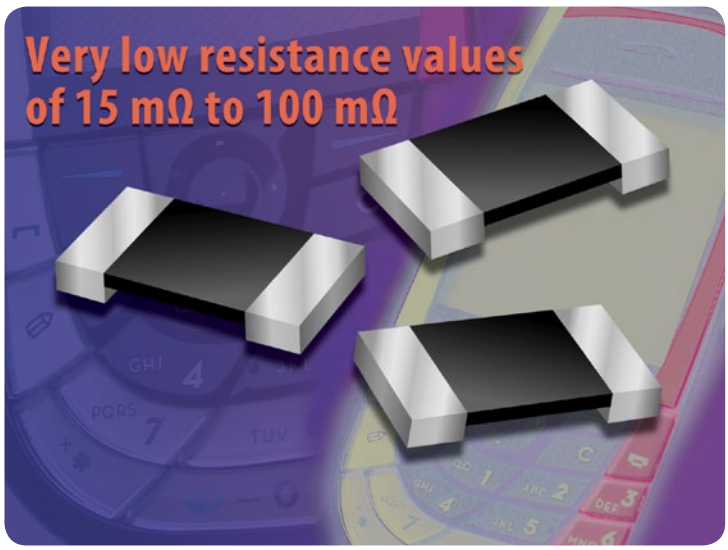
POWER METAL STRIP® RESISTOR

WSL0603

Resistors - Low Resistance Values Down to 15 mΩ

1/10-Watt, Surface-Mount, Power Metal Strip® Resistor



KEY BENEFITS

- Very low resistance values of 15 mΩ to 100 mΩ
- Small 0603 package
- Low RTC resistance element (< 20 ppm/°C) results in accurate current sensing, allowing the use of lower cost ICs
- Provides high-temperature performance that can surpass that of thick film resistors
- Saves space by enabling use of a single low-value resistor instead of multiple high-value resistors in parallel

APPLICATIONS

- Telecommunications
- Automotive
- Computer
- Consumer
- Industrial

RESOURCES

- Datasheet: WSL0603 - http://www.vishay.com/doc?30100
- For technical questions contact ww2bresistors@vishay.com

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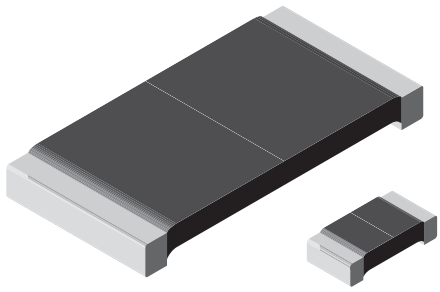

FEATURES

- 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

Pb-free Available

e3

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

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	SIZE	POWER RATING $P_{70\,°C}$ 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 (1)	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.

(1) 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