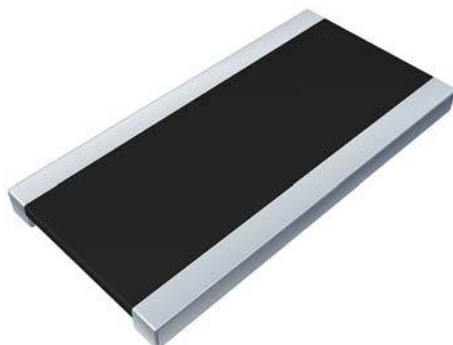


Power Metal Strip® Resistors, Wide Terminal, Low Value (0.003 Ω to 0.006 Ω), Surface Mount



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)
- AEC-Q200 qualified available ⁽¹⁾
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

AUTOMOTIVE
GRADE
Available



e3

RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)
Available

Note

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

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	SIZE	POWER RATING $P_{70\text{ }^{\circ}\text{C}}$ 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

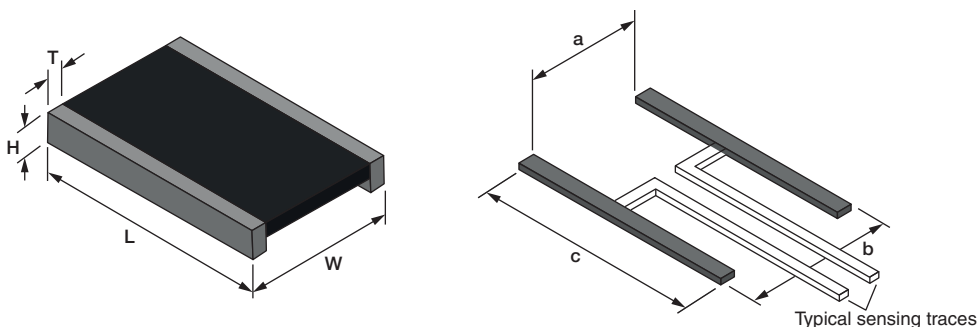
PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Temperature coefficient - Resistor	ppm/°C	± 175
Temperature coefficient - Element material	ppm/°C	< 20
Operating temperature range	°C	-65 to +170
Maximum working voltage	V	$(P \times R)^{1/2}$

GLOBAL PART NUMBER INFORMATION

Global Part Numbering: WSL10206L000FEA

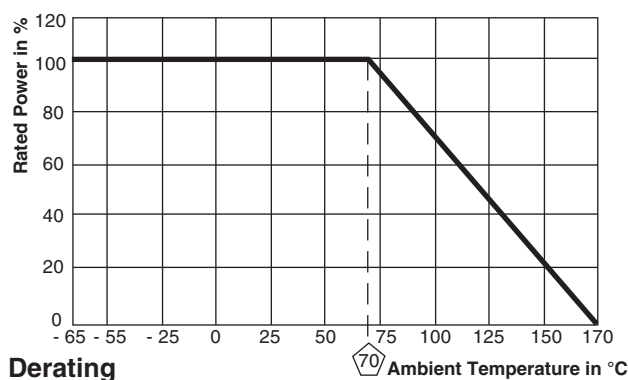
W	S	L	1	0	2	0	6	L	0	0	0	F	E	A		
GLOBAL MODEL (7 digits)			RESISTANCE VALUE (5 digits)			TOLERANCE CODE (1 digit)			PACKAGING CODE (2 digits)			SPECIAL (up to 2 digits)				
WSL1020			L = mΩ* 3L000 = 0.003 Ω 4L000 = 0.004 Ω 5L000 = 0.005 Ω 6L000 = 0.006 Ω * Use “L” for resistance values < 0.01 Ω			D = ± 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				

DIMENSIONS



MODEL	DIMENSIONS in inches (millimeters)			
	L	W	H	T
WSL1020	0.200 ± 0.010 (5.08 ± 0.254)	0.100 ± 0.010 (2.54 ± 0.254)	0.025 ± 0.010 (0.635 ± 0.254)	0.015 ± 0.010 (0.381 ± 0.254)

MODEL	SOLDER PAD DIMENSIONS in inches (millimeters)		
	a	b	c
WSL1020	0.039 (1.00)	0.138 (3.50)	0.222 (5.65)



PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Thermal shock	-55 °C to +150 °C, 1000 cycles, 15 min at each extreme	± 0.5 % ΔR
Low temperature operation	-65 °C for 45 min	± 0.5 % ΔR
High temperature exposure	1000 h at + 170 °C	± 1.0 % ΔR
Bias humidity	+85 °C, 85 % RH, 10 % bias, 1000 h	± 0.5 % ΔR
Mechanical shock	100 g's for 6 ms, 5 pulses	± 0.5 % ΔR
Vibration	Frequency varied 10 Hz to 2000 Hz in 1 min, 3 directions, 12 h	± 0.5 % ΔR
Load life	1000 h at 70 °C, 1.5 h "ON", 0.5 h "OFF"	± 1.0 % ΔR
Resistance to solder heat	+260 °C solder, 10 s to 12 s dwell, 25 mm/s emergence	± 0.5 % ΔR
Moisture resistance	MIL-STD-202, method 106, 0 % power, 7b not required	± 0.5 % ΔR

PACKAGING				
MODEL	REEL			
	TAPE WIDTH	DIAMETER	PIECES/REEL	CODE
WSL1020	12 mm/embossed plastic	178 mm/7"	4000	EA

Note

- Embossed Carrier Tape per EIA-481-2.



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