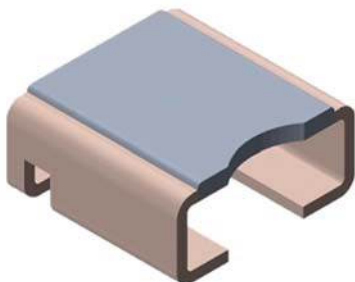


## Power Metal Strip® Resistors, Low Value, High Power, Surface Mount, 4-Terminal



### FEATURES

- 4-Terminal design allows for 1 % tolerance down to 0.0003  $\Omega$
- High power to foot print size ratio
- Ideal for all types of current sensing, voltage division and pulse applications including switching and linear power supplies, instruments, power amplifiers and shunts
- Proprietary processing technique produces extremely low resistance values, down to 0.0003  $\Omega$
- All welded construction
- Solid metal nickel-chrome or manganese-copper alloy resistive element with low TCR (< 20 ppm/°C)
- Very low inductance 0.5 nH to 5 nH
- Low thermal EMF (< 3  $\mu$ V/°C)
- AEC-Q200 qualified available <sup>(1)</sup>
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

**AUTOMOTIVE  
GRADE**  
Available



**RoHS  
COMPLIANT**  
**HALOGEN  
FREE**  
**GREEN**  
(5-2008)

### Note

- <sup>(1)</sup> 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 $\pm$ %	RESISTANCE VALUE RANGE $\Omega$	RESISTANCE VALUES CURRENTLY AVAILABLE <sup>(2)</sup> $\Omega$	WEIGHT (typical) g/1000 pieces
WSL2726	2726	3.0	1.0	0.3m to 5m	0.3m, 0.5m, 0.7m, 1m, 2m, 3m, 4m, 5m	420

### Notes

- Power rating depends on the max. temperature at the solder point, component placement density and the substrate material.
- Part marking: Model, value, tolerance, date code.
- <sup>(2)</sup> Other values may be available, contact factory.

### TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Temperature coefficient	ppm/°C	$\pm$ 75 over temperature of +20 °C to +60 °C
Element TCR	ppm/°C	< 20
Operating temperature range	°C	-65 to +170
Maximum working voltage	V	$(P \times R)^{1/2}$

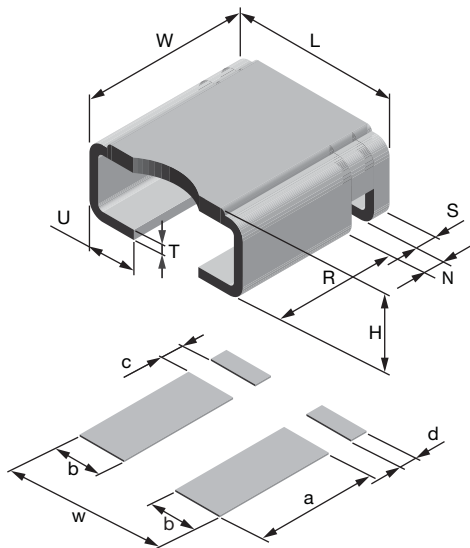
### GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: **WSL2726L5000FEA** (WSL2726, 0.0005  $\Omega$ ,  $\pm$  1 %)

<b>W</b>	<b>S</b>	<b>L</b>	<b>2</b>	<b>7</b>	<b>2</b>	<b>6</b>	<b>L</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>F</b>	<b>E</b>	<b>A</b>		
GLOBAL MODEL			RESISTANCE VALUE					TOLERANCE CODE			PACKAGING CODE			SPECIAL		
WSL2726			<b>L</b> = m $\Omega$ <b>L3000</b> = 0.0003 $\Omega$ <b>L5000</b> = 0.0005 $\Omega$ <b>L7000</b> = 0.0007 $\Omega$ <b>1L000</b> = 0.0010 $\Omega$ <b>2L000</b> = 0.0020 $\Omega$ <b>3L000</b> = 0.0030 $\Omega$ <b>4L000</b> = 0.0040 $\Omega$ <b>5L000</b> = 0.0050 $\Omega$					<b>F</b> = $\pm$ 1.0 %			<b>EA</b> = Lead (Pb)-free, tape/reel <b>EK</b> = Lead (Pb)-free, bulk			(Dash number) (Up to 2 digits) From <b>1 to 99</b> as applicable		

## DIMENSIONS

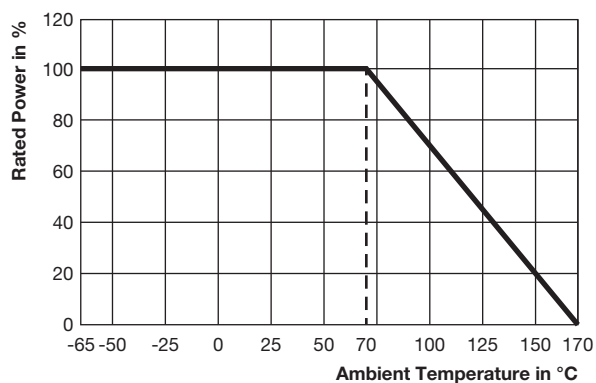
MODEL	DIMENSIONS in inches (millimeters)							
	L	W	H	R (REF.)	S	T	U	N
WSL2726	$0.272 \pm 0.008$ (6.9 $\pm$ 0.2)	$0.260 + 0.012/- 0.008$ (6.6 + 0.3/- 0.2)	Please see table below	0.198 (5.0)	$0.028 \pm 0.004$ (0.7 $\pm$ 0.1)	$0.016 \pm 0.002$ (0.4 $\pm$ 0.05)	$0.078 \pm 0.004$ (2.0 $\pm$ 0.1)	$0.039 \pm 0.006$ (0.99 $\pm$ 0.15)



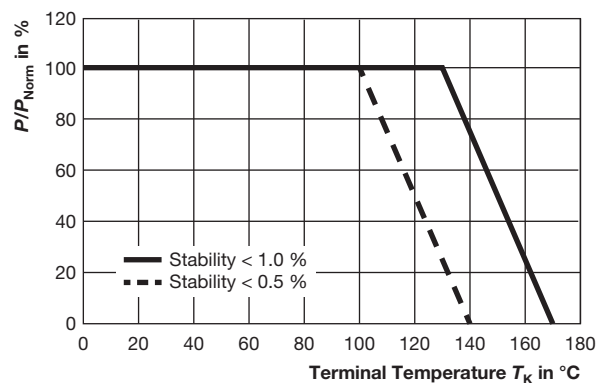
MODEL	SOLDER PAD DIMENSIONS in inches (millimeters)				
	a	b	c	d	w
WSL2726	0.220 (5.6)	0.096 (2.44)	0.035 (0.89)	0.035 (0.89)	0.290 (7.4)

MODEL	RESISTANCE VALUE (m $\Omega$ )	ELEMENT MATERIAL	HEIGHT H
WSL2726	0.3	Mn-Cu	$0.141 \pm 0.008$ (3.58 $\pm$ 0.2)
	0.5	Mn-Cu	$0.116 \pm 0.008$ (2.95 $\pm$ 0.2)
	0.7	Mn-Cu	$0.111 \pm 0.008$ (2.82 $\pm$ 0.2)
	1.0	Mn-Cu	$0.1055 \pm 0.008$ (2.68 $\pm$ 0.2)
	2.0	Ni-Cr	$0.114 \pm 0.008$ (2.9 $\pm$ 0.2)
	3.0	Ni-Cr	$0.110 \pm 0.008$ (2.79 $\pm$ 0.2)
	4.0	Ni-Cr	$0.110 \pm 0.008$ (2.79 $\pm$ 0.2)
	5.0	Ni-Cr	$0.110 \pm 0.008$ (2.79 $\pm$ 0.2)

## DERATING - AMBIENT TEMPERATURE



## DERATING - TERMINAL TEMPERATURE



Example: WSL2726 0.0005  $\Omega$



PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Thermal shock	-55 °C to +150 °C, 1000 cycles, 15 min at each extreme	$\pm (0.5 \%) \Delta R$
Short time overload	0.3 mΩ, 0.5 mΩ, 2 mΩ and 3 mΩ - 5x rated power for 5 s 4 mΩ and 5 mΩ - 3x rated power for 5 s	$\pm (0.5 \%) \Delta R$
Low temperature operation	-65 °C for 45 min	$\pm (0.5 \%) \Delta R$
High temperature exposure	1000 h at +170 °C	$\pm (1.0 \%) \Delta R$
Bias humidity	+85 °C, 85 % RH, 10 % bias, 1000 h	$\pm (0.5 \%) \Delta R$
Mechanical shock	100 g's for 6 ms, 5 pulses	$\pm (0.5 \%) \Delta R$
Vibration	Frequency varied 10 Hz to 2000 Hz in 1 min, 3 directions, 12 h	$\pm (0.5 \%) \Delta R$
Load life	1000 h at +70 °C, 1.5 h "ON", 0.5 h "OFF"	$\pm (1.0 \%) \Delta R$
Resistance to solder heat	+260 °C solder, 10 s to 12 s dwell, 25 mm/s emergence	$\pm (0.5 \%) \Delta R$
Moisture resistance	MIL-STD-202, method 106, 0 % power, 7b not required	$\pm (0.5 \%) \Delta R$

PACKAGING				
MODEL	REEL			
	TAPE WIDTH	DIAMETER	PIECES/REEL	CODE
WSL2726	16 mm/embossed plastic	330 mm/13"	1500	EA

**Note**

- Embossed Carrier Tape per EIA-481.



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