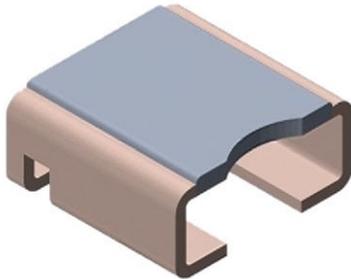


# Power Metal Strip® Resistors, Very High Power (to 7 W), Low Value (down to 0.0003 Ω), Surface Mount



## FEATURES

- High power to foot print size ratio
- All welded construction of the Power Metal Strip® resistors are ideal for all types of current sensing, voltage division and pulse applications
- Proprietary processing technique produces extremely low resistance values, down to 0.0003 Ω
- Specially selected and stabilized materials allow for high power rating (to 7 W)
- Construction is unaffected by high sulfur environments
- 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 μV/°C)
- AEC-Q200 qualified <sup>(1)</sup>
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

AUTOMOTIVE GRADE


**RoHS**  
 COMPLIANT  
 HALOGEN  
**FREE**  
**GREEN**  
(5-2008)
**DESIGN TOOLS** (click logo to get started)


### Notes

- Follow link to Overview of Automotive Grade Products for more details: [www.vishay.com/doc?49924](http://www.vishay.com/doc?49924)
- <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 ± %	RESISTANCE VALUE RANGE Ω	RESISTANCE VALUES CURRENTLY AVAILABLE <sup>(2)</sup> Ω	WEIGHT (typical) g/1000 pieces
WSLP2726	2726	5.0	1.0, 5.0	2m to 5m	2m, 3m, 4m, 5m	420
WSLP2726	2726	7.0	1.0, 5.0	0.3m to 1m	0.3m, 0.5m, 0.7m, 1m	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>(1)</sup> Other values may be available, contact factory

GLOBAL PART NUMBER INFORMATION																	
Global Part Numbering: <b>WSLP2726L5000FEA</b> (visit <a href="http://www.vishay.net">www.vishay.net</a> Vishay Dale parts numbering manual for all options)																	
W	S	L	P	2	7	2	6	L	5	0	0	0	F	E	A		
GLOBAL MODEL (8 digits)		RESISTANCE VALUE (5 digits)			TOLERANCE CODE (1 digit)		PACKAGING CODE <sup>(1)</sup> (2 digits)			SPECIAL (2 digits)							
WSLP2726		L = mΩ L5000 = 0.0005 Ω L7000 = 0.0007 Ω 1L000 = 0.0010 Ω 2L000 = 0.0020 Ω			F = ± 1.0 % J = ± 5.0 %		EA = lead (Pb)-free, tape/reel EK = lead (Pb)-free, bulk			(dash number) (up to 2 digits) from 1 to 99 as applicable							

### Note

- <sup>(1)</sup> Packaging code: EB (lead (Pb)-free) is a non-standard packaging code designating 1000 piece reels. The non-standard packaging code is identical to our standard EA (lead (Pb)-free), except that it is a package quantity of 1000 pieces

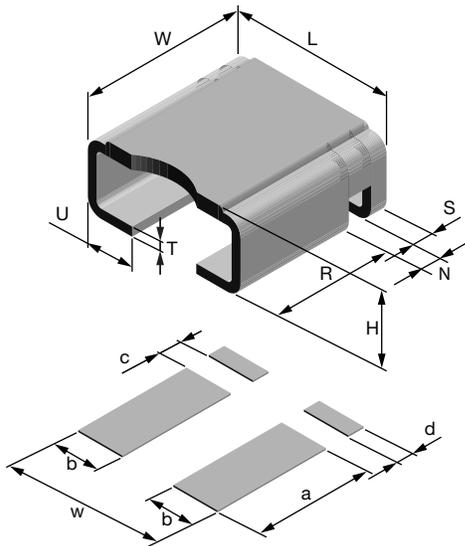
TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Component temperature coefficient (including terminal) <sup>(1)</sup>	ppm/°C	± 75 for 0.5 mΩ to 5 mΩ
		± 110 for 0.3 mΩ
Element TCR <sup>(2)</sup>	ppm/°C	< 20
Operating temperature range	°C	-65 to +170
Maximum working voltage <sup>(3)</sup>	V	$(P \times R)^{1/2}$

**Notes**

- (1) Component TCR - total TCR that includes the TCR effects of the resistor element and the copper terminal
- (2) Element TCR - only applies to the alloy used for the resistor element; refer to item 1 in the construction illustration on the following page
- (3) Maximum working voltage - the WSL is not voltage sensitive, but is limited by power / energy dissipation and is also not ESD sensitive

**DIMENSIONS** in inches (millimeters)

MODEL	DIMENSIONS							
	L	W	H	R (REF.)	S	T	U	N
WSLP2726	0.272 ± 0.008 (6.9 ± 0.2)	0.260 + 0.012/- 0.008 (6.6 + 0.3/- 0.2)	Please see table below	0.195 (5.0)	0.028 ± 0.004 (0.7 ± 0.1)	0.016 ± 0.002 (0.4 ± 0.05)	0.078 ± 0.004 (2.0 ± 0.1)	0.039 ± 0.006 (0.99 ± 0.15)



MODEL	SOLDER PAD DIMENSIONS				
	a	b	c	d	w
WSLP2726	0.220 (5.6)	0.096 (2.44)	0.035 (0.89)	0.035 (0.89)	0.290 (7.4)

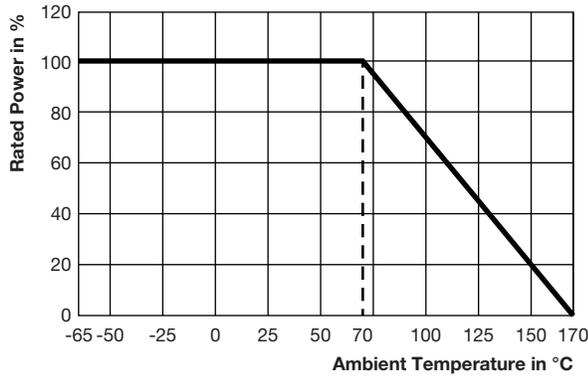
MODEL	RESISTANCE VALUE (mΩ)	ELEMENT MATERIAL	HEIGHT H
WSLP2726	0.3	Mn-Cu	0.141 ± 0.008 (3.58 ± 0.2)
WSLP2726	0.5	Mn-Cu	0.116 ± 0.008 (2.95 ± 0.2)
WSLP2726	0.7	Mn-Cu	0.111 ± 0.008 (2.82 ± 0.2)
WSLP2726	1.0	Mn-Cu	0.1055 ± 0.008 (2.68 ± 0.2)
WSLP2726	2.0	Ni-Cr	0.114 ± 0.008 (2.9 ± 0.2)
WSLP2726	3.0	Ni-Cr	0.108 ± 0.008 (2.74 ± 0.2)
WSLP2726	4.0	Ni-Cr	0.1046 ± 0.008 (2.66 ± 0.2)
WSLP2726	5.0	Ni-Cr	0.110 ± 0.008 (2.79 ± 0.2)

**Notes**

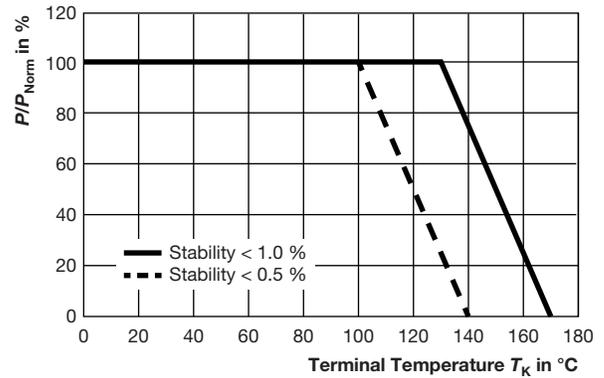
- 3D models available: [www.vishay.com/doc?30314](http://www.vishay.com/doc?30314)
- Surface mount solder profile recommendations: [www.vishay.com/doc?31052](http://www.vishay.com/doc?31052)



DERATING - AMBIENT TEMPERATURE



DERATING - TERMINAL TEMPERATURE



Example: WSLP2726 0.0005 Ω, 0.001 Ω

PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Thermal shock	-55 °C to +150 °C, 1000 cycles, 15 min at each extreme	± 0.5 %
Low temperature operation	-65 °C for 24 h	± 0.5 %
High temperature exposure	1000 h at +170 °C	± 1.0 %
Bias humidity	85 °C, 85 % RH, 10 % bias, 1000 h	± 0.5 %
Mechanical shock	100 g's for 6 ms, 5 pulses	± 0.5 %
Vibration	Frequency varied 10 Hz to 2000 Hz in 1 min, 3 directions, 12 h	± 0.5 %
Load life	1000 h at +70 °C, 1.5 h "ON", 0.5 h "OFF"	± 1.0 %
Resistance to solder heat	+260 °C solder, 10 s to 12 s dwell, 25 mm/s emergence	± 0.5 %
Moisture resistance	MIL-STD-202, method 106, 0 % power, 7b not required	± 0.5 %

PACKAGING (1)				
MODEL	REEL			
	TAPE WIDTH	DIAMETER	PIECES/REEL	CODE
WSLP2726	16 mm/embossed plastic	330 mm/13"	1500	EA

Notes

- Embossed carrier tape per EIA-481
- (1) Additional packaging details at [www.vishay.com/doc?20051](http://www.vishay.com/doc?20051)



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