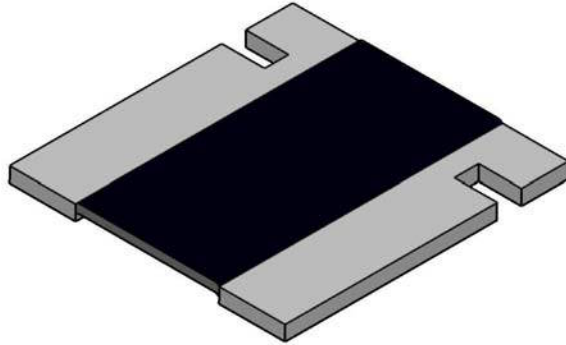


Power Metal Strip® Resistors, Low Value (down to 0.001 Ω), Surface Mount, 4-Terminal



DESIGN TOOLS (click logo to get started)



FEATURES

- 4-terminal design allows for 0.5 % resistance tolerance down to 0.001 Ω
- 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 0.001 Ω)
- Construction is impervious against a high sulfur environment (ASTM B 809-95 test method)
- Solid metal nickel-chrome alloy resistive element with low TCR (< 20 ppm/°C)
- Low thermal EMF (< 3 μV/°C)
- Very low inductance, 0.5 nH to 5 nH
- Excellent frequency response to 50 MHz
- AEC-Q200 qualified ⁽¹⁾
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



Notes

- * This datasheet provides information about parts that are RoHS-compliant and/or parts that are non-RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information / tables in this datasheet for details.
- Follow link to Overview of Automotive Grade Products for more details: www.vishay.com/doc?49924.
- ⁽¹⁾ Flame retardance test may not be applicable to some resistor technologies.

STANDARD ELECTRICAL SPECIFICATIONS					
GLOBAL MODEL	SIZE	POWER RATING <i>P</i> _{70 °C} W	TOLERANCE ± %	RESISTANCE VALUE RANGE Ω	WEIGHT (typical) g/1000 pieces
WSL3637	3637	3.0	0.5 and 1.0	0.001 to 0.01	274.3

TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Temperature coefficient	ppm/°C	± 75 for 0.001 Ω to 0.0029 Ω, ± 50 for 0.003 Ω to 0.010 Ω
Element TCR	ppm/°C	< 20
Operating temperature range	°C	-65 to +170
Maximum working voltage	V	(<i>P</i> × <i>R</i>) ^{1/2}

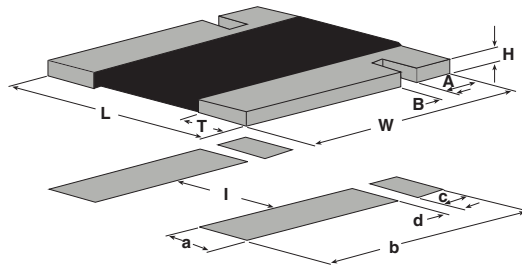
GLOBAL PART NUMBER INFORMATION

GLOBAL PART NUMBERING EXAMPLE: WSL36375L000FEA (visit www.vishay.net Vishay Dale parts numbering manual for all options)

W	S	L	3	6	3	7	5	L	0	0	0	F	E	A		
GLOBAL MODEL			RESISTANCE VALUE ⁽¹⁾			TOLERANCE CODE			PACKAGING CODE ⁽²⁾			SPECIAL				
WSL3637			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 %			EA = lead (Pb)-free, tape / reel EK = lead (Pb)-free, bulk TA = tin / lead, tape/reel (R86) BA = tin / lead, bulk (B43)			(Dash number) (up to 2 digits) From 1 to 99 as applicable				

Notes

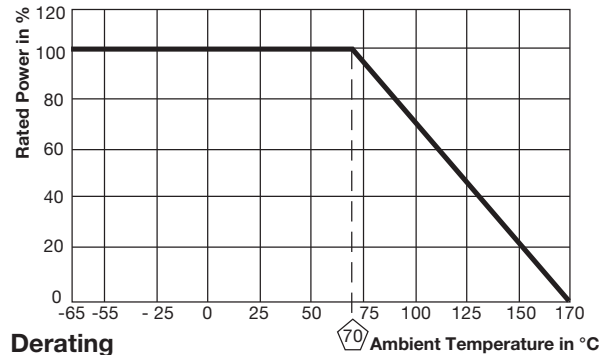
- ⁽¹⁾ WSL marking (www.vishay.com/doc?30327)
- ⁽²⁾ Packaging code: EB (lead (Pb)-free) and TB (tin / lead) are non-standard packaging codes designating 1000 piece reels. These non-standard packaging codes are identical to our standard EA (lead (Pb)-free) and TA (tin / lead), except that they have a package quantity of 1000 pieces.

DIMENSIONS

Note

- 3D models available: www.vishay.com/doc?30303

MODEL	DIMENSIONS in inches (millimeters)						
	RESISTANCE RANGE (Ω)	W	L	H	T	A	B
WSL3637	0.002 to 0.01	0.370 ± 0.010 (9.40 \pm 0.254)	0.360 ± 0.010 (9.14 \pm 0.254)	0.025 ± 0.010 (0.635 \pm 0.254)	0.086 ± 0.010 (2.18 \pm 0.254)	0.061 ± 0.010 (1.55 \pm 0.254)	0.032 ± 0.010 (0.813 \pm 0.254)
	0.001 to 0.0019				0.138 ± 0.010 (3.51 \pm 0.254)		

MODEL	SOLDER PAD DIMENSIONS in inches (millimeters)					
	RESISTANCE RANGE (Ω)	a	b	c	d	I
WSL3637	0.002 to 0.01	0.116 (2.95)	0.390 (9.91)	0.066 (1.68)	0.024 (0.610)	0.178 (4.52)
	0.001 to 0.0019	0.168 (4.27)	0.390 (9.91)	0.066 (1.68)	0.024 (0.610)	0.074 (1.88)



PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Thermal shock	-55 °C to +150 °C, 1000 cycles, 15 min at each extreme	$\pm (0.5 \% + 0.0005 \Omega)$
Short time overload	5 x rated power for 5 s	$\pm (0.5 \% + 0.0005 \Omega)$
Low temperature storage	-65 °C for 24 h	$\pm (0.5 \% + 0.0005 \Omega)$
High temperature exposure	1000 h at + 170 °C	$\pm (1.0 \% + 0.0005 \Omega)$
Bias humidity	+85 °C, 85 % RH, 10 % bias, 1000 h	$\pm (0.5 \% + 0.0005 \Omega)$
Mechanical shock	100 g's for 6 ms, 5 pulses	$\pm (0.5 \% + 0.0005 \Omega)$
Vibration	Frequency varied 10 Hz to 2000 Hz in 1 min, 3 directions, 12 h	$\pm (0.5 \% + 0.0005 \Omega)$
Load life	1000 h at rated power, +70 °C, 1.5 h "ON", 0.5 h "OFF"	$\pm (1.0 \% + 0.0005 \Omega)$
Solder heat	+260 °C solder, 10 s to 12 s dwell, 25 mm/s emergence	$\pm (0.5 \% + 0.0005 \Omega)$
Moisture resistance	MIL-STD-202, method 106, 0 % power, 7a and 7b not required	$\pm (0.5 \% + 0.0005 \Omega)$

PACKAGING				
MODEL	REEL			
	TAPE WIDTH	DIAMETER	PIECES/REEL	CODE
WSL3637	16 mm/embossed plastic	330 mm/13"	4000	EA

Notes

- Embossed Carrier Tape per EIA-481.
- Additional packaging details at www.vishay.com/doc?20051.



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