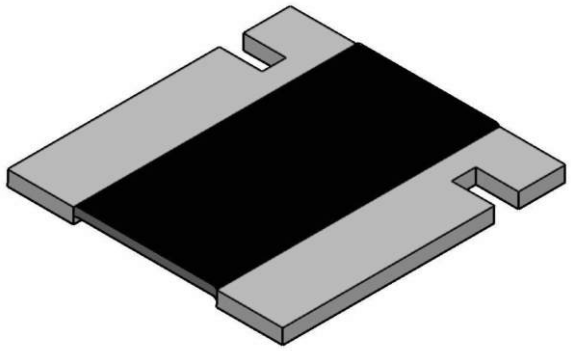
Power Metal Strip® Resistors, Low Value (down to 0.001 Ω), Surface Mount, 4-Terminal



FEATURES

- 4-Terminal design allows for 0.5 % resistance tolerance down to 0.003 Ω
- Ideal for all types of current sensing, voltage division and pulse applications including switching and linear power supplies, instruments and power amplifiers
- Proprietary processing technique produces extremely low resistance values (down to 0.001 Ω)
- All welded construction
- Solid metal Nickel-Chrome alloy resistive element with low TCR (< 20 ppm/°C)
- Solderable terminations
- Low thermal EMF (< 3 µV/°C)
- Very low inductance, 0.5 nH to 5 nH
- Excellent frequency response to 50 MHz
- Compliant to RoHS directive 2002/95/EC

Pb-free Available

e3

RoHS* COMPLIANT

GREEN (5-2008)** Available

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	POWER RATING $P_{70\,°C}$ W	TOLERANCE %	RESISTANCE RANGE Ω
WSL3637	3.0	0.5 and 1.0	0.001 to 0.01

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	WSL3637
Temperature Coefficient	ppm/°C	0.001 Ω to 0.0029 Ω = ± 75 0.003 Ω to 0.010 Ω = ± 50
Operating Temperature Range	°C	- 65 to + 170
Maximum Working Voltage	V	$(P \times R)^{1/2}$
Weight/1000 pieces	g	274.3

GLOBAL PART NUMBER INFORMATION

NEW GLOBAL PART NUMBERING: WSL36375L000FTA (PREFERRED PART NUMBERING FORMAT)

W	S	L	3	6	3	7	5	L	0	0	0	F	T	A		

GLOBAL MODEL	VALUE	TOLERANCE	PACKAGING	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

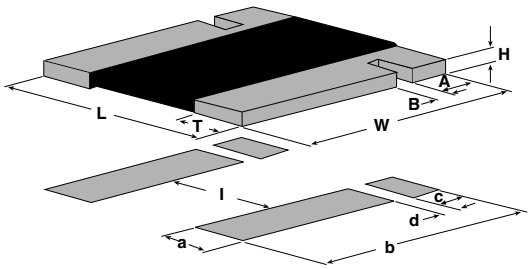
HISTORICAL PART NUMBER EXAMPLE: WSL3637 0.005 Ω 1 % R86 (WILL CONTINUE TO BE ACCEPTED)

WSL3637	0.005 Ω	1 %	R86
HISTORICAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING

* Pb containing terminations are not RoHS compliant, exemptions may apply

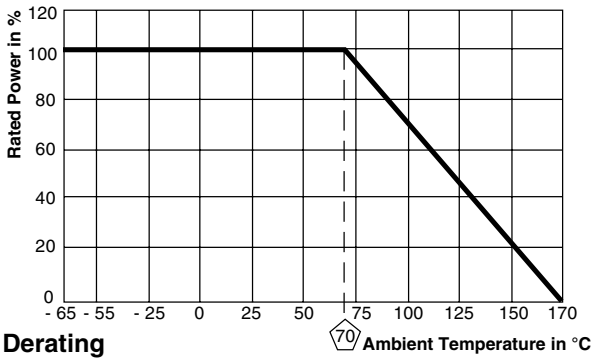
** Please see document "Vishay Material Category Policy": www.vishay.com/doc?99902

DIMENSIONS



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 ± 0.254]	0.360 ± 0.010 [9.14 ± 0.254]	0.025 ± 0.010 [0.635 ± 0.254]	0.086 ± 0.010 [2.18 ± 0.254]	0.061 ± 0.010 [1.55 ± 0.254]	0.032 ± 0.010 [0.813 ± 0.254]
	0.001 to 0.0019	0.370 ± 0.010 [9.40 ± 0.254]	0.360 ± 0.010 [9.14 ± 0.254]	0.025 ± 0.010 [0.635 ± 0.254]	0.138 ± 0.010 [3.51 ± 0.254]	0.061 ± 0.010 [1.55 ± 0.254]	0.032 ± 0.010 [0.813 ± 0.254]

MODEL	SOLDER PAD DIMENSIONS in inches [millimeters]					
	RESISTANCE RANGE Ω	a	b	c	d	l
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 [1.66]	0.024 [0.610]	0.074 [1.88]



Derating

PERFORMANCE

TEST	CONDITIONS OF TEST	TEST LIMITS
Thermal Shock	- 55 °C to + 150 °C, 1000 cycles, 15 min at each extreme	± (0.5 % + 0.0005 Ω) Δ*R*
Short Time Overload	5 x Rated Power for 5 s	± (0.5 % + 0.0005 Ω) Δ*R*
Low Temperature Storage	- 65 °C for 24 h	± (0.5 % + 0.0005 Ω) Δ*R*
High Temperature Exposure	1000 h at + 170 °C	± (1.0 % + 0.0005 Ω) Δ*R*
Bias Humidity	+ 85 °C, 85 % RH, 10 % Bias, 1000 h	± (0.5 % + 0.0005 Ω) Δ*R*
Mechanical Shock	100 g's for 6 ms, 5 pulses	± (0.5 % + 0.0005 Ω) Δ*R*
Vibration	Frequency varied 10 Hz to 2000 Hz in 1 min, 3 directions, 12 h	± (0.5 % + 0.0005 Ω) Δ*R*
Load Life	1000 h at rated power, + 70 °C, 1.5 h "ON", 0.5 h "OFF"	± (1.0 % + 0.0005 Ω) Δ*R*
Solder Heat	+ 260 °C Solder, 10 s to 12 s dwell, 25 mm/s emergence	± (0.5 % + 0.0005 Ω) Δ*R*
Moisture Resistance	MIL-STD-202, Method 106, 0 % power, 7a and 7b not required	± (0.5 % + 0.0005 Ω) Δ*R*

PACKAGING

MODEL	REEL			
	TAPE WIDTH	DIAMETER	PIECES/REEL	CODE
WSL3637	16 mm/Embossed Plastic	330 mm/13"	4000	EA

Note
- Embossed carrier tape per EIA-481-2

Disclaimer

All product specifications and data are subject to change without notice.

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