

## Power Metal Strip® Meter Shunt Resistor Very Low Value (down to 0.0003 Ω)



### FEATURES

- High power to resistor size ratio
- 5-terminal connection design
- Use for single or multi-phase energy meters
- Proprietary processing technique produces extremely low resistance values
- All welded construction
- Very low inductance (< 5 nH)
- Low thermal EMF (< 3 μV/°C)
- Compliant to RoHS Directive 2002/95/EC



**RoHS**  
COMPLIANT  
**GREEN**  
(5-2008)\*\*

### Note

\*\* Please see document "Vishay Material Category Policy": [www.vishay.com/doc?99902](http://www.vishay.com/doc?99902)

### STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	SIZE	POWER RATING $P_{70^{\circ}\text{C}}$ W	TOLERANCE %	RESISTANCE VALUE RANGE Ω	RESISTANCE VALUES CURRENTLY AVAILABLE <sup>(1)</sup> Ω	WEIGHT (typical) g/1000 pieces
WSMS2906	2906	3.0	5.0	300μ to 660μ	300μ, 400μ, 500μ	4.7

### Note

<sup>(1)</sup> Other values may be available, contact factory

### TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/°C	± 100 for 300 μΩ and 400 μΩ, ± 75 for 500 μΩ
Operating Temperature Range	°C	- 65 to + 170
Maximum Current Rating	A	$(P/R)^{1/2}$

### GLOBAL PART NUMBER INFORMATION

GLOBAL PART NUMBERING EXAMPLE: WSMS2906L4000JK (WSMS2906, 0.0004 Ω, ± 5 %)

W S M S 2 9 0 6 L 4 0 0 0 J K

GLOBAL MODEL  
**WSMS2906**

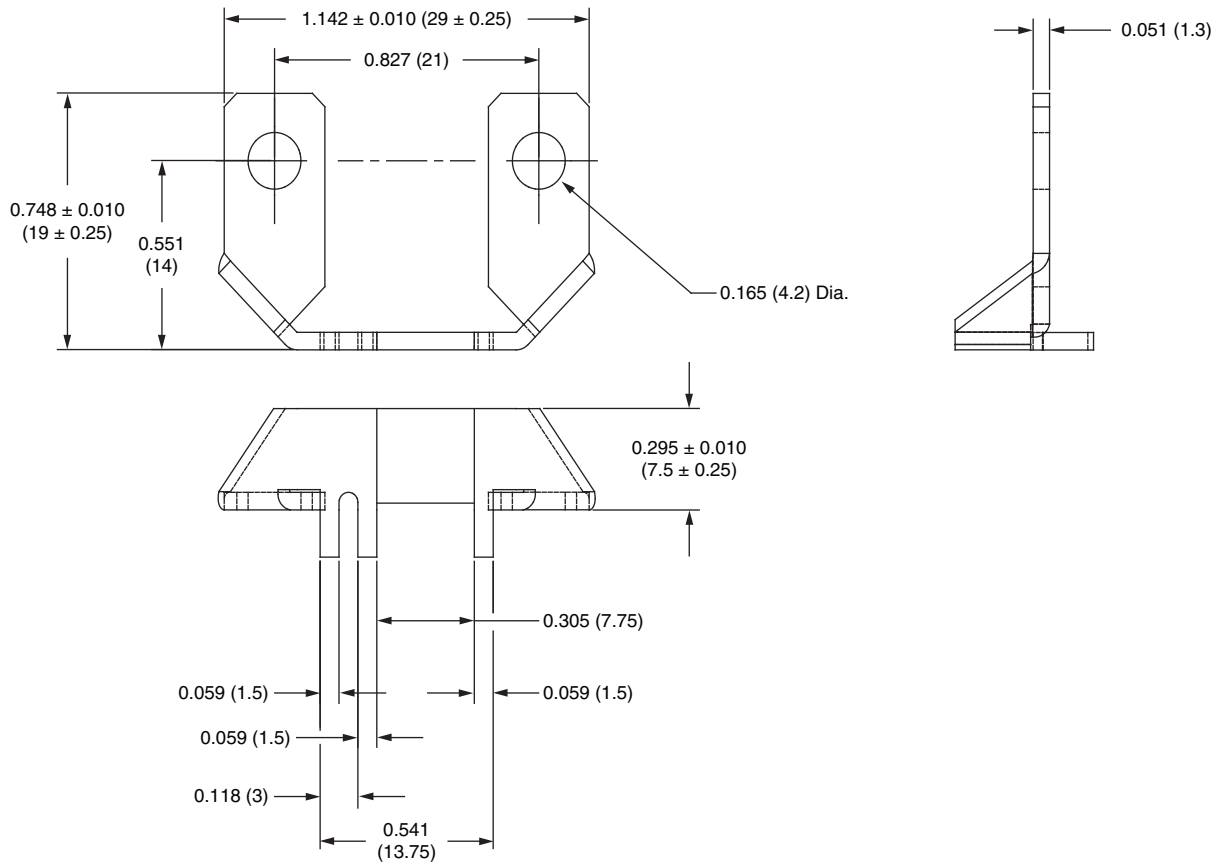
RESISTANCE VALUE  
L = mΩ  
L3000 = 0.00030 Ω  
L4000 = 0.00040 Ω  
L5000 = 0.00050 Ω

TOLERANCE CODE  
J = ± 5.0 %

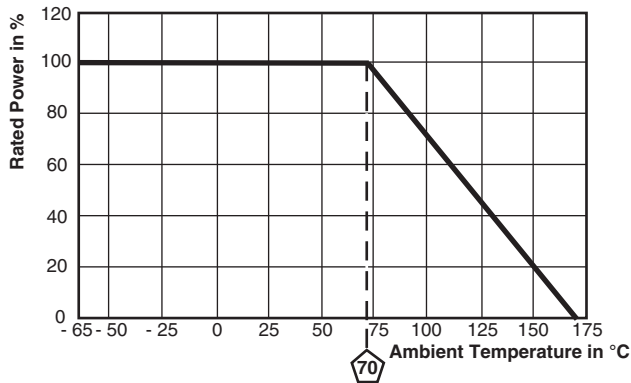
PACKAGING CODE  
K = Bulk pack

SPECIAL  
(Dash number)  
(Up to 2 digits)  
From 1 to 99 as applicable

**DIMENSIONS** in inches (millimeters)



**DERATING**



TOLERANCES ON DECIMALS  
XXX ± 0.005

RESISTANCE VALUE (μΩ)	ELEMENT MATERIAL
300, 400, 500	Mn-Cu

PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Thermal Shock	- 55 °C to + 150 °C, 1000 cycles, 15 min at each extreme	± 0.5 % ΔR
Short Time Overload	5 x rated power for 5 s	± 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
Moisture Resistance	MIL-STD-202, method 106, 0 % power, 7b not required	± 0.5 % ΔR



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