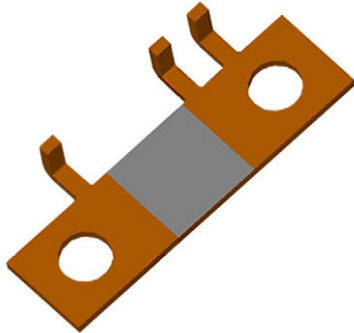


## Power Metal Strip® Meter Shunt Resistor, Very Low Value (down to 0.0001 Ω)



### 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)
- AEC-Q200 qualified
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

 AUTOMOTIVE  
GRADE

**RoHS**  
COMPLIANT

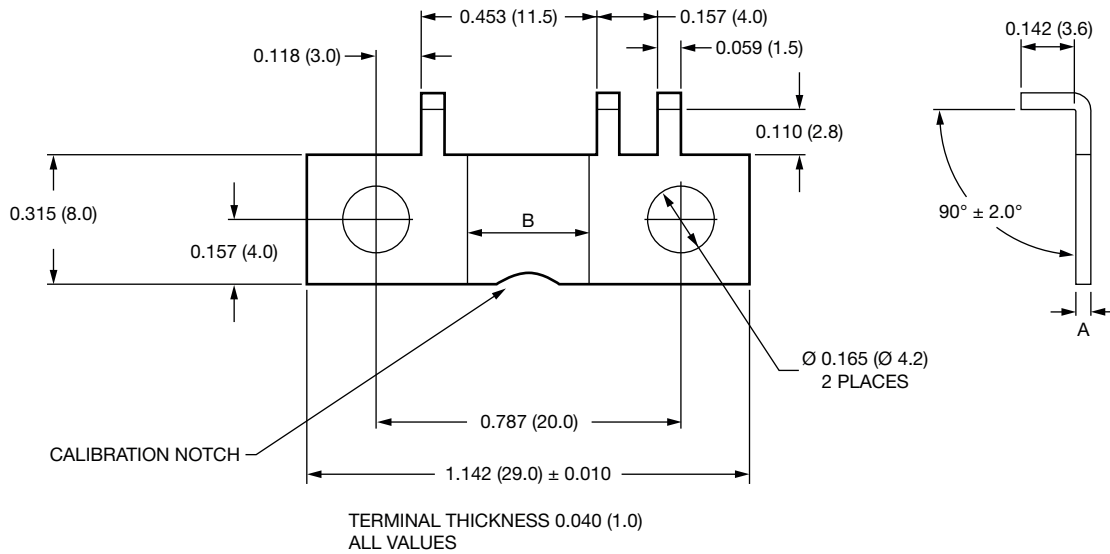
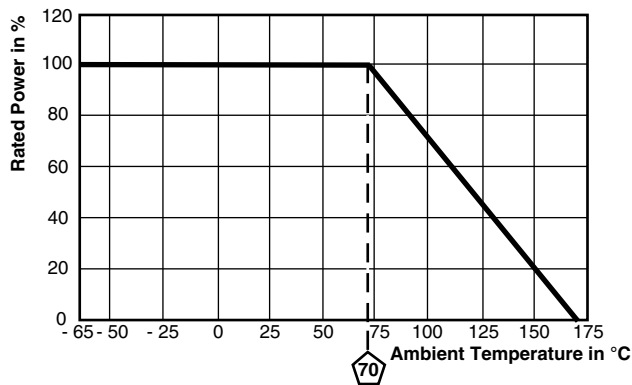
 HALOGEN  
**FREE**
**GREEN**  
(5-2008)

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
WSMS2908	2908	3.0	5.0	50μ to 1000μ	100μ, 250μ, 300μ, 430μ, 500μ	2100

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

TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Temperature coefficient	ppm/°C	± 1100 for 100 μΩ, ± 300 for 250 μΩ, ± 225 for 300 μΩ, ± 175 for 430 μΩ and 500 μΩ
Operating temperature range	°C	-65 to +170
Maximum current rating	A	$(P/R)^{1/2}$

GLOBAL PART NUMBER INFORMATION				
GLOBAL PART NUMBERING: WSMS2908L1000JE (WSMS2908, 0.0001 Ω, ± 5 %, tape / reel)				
W	S	M	S	2
9	0	8	L	1
0	0	0	J	E
GLOBAL MODEL <b>WSMS2908</b>	RESISTANCE VALUE L = mΩ L1000 = 0.00010 Ω L2500 = 0.00025 Ω L3000 = 0.00030 Ω L4300 = 0.00043 Ω L5000 = 0.00050 Ω	TOLERANCE CODE J = ± 5.0 %	PACKAGING CODE K = bulk pack E = tape and reel	SPECIAL (dash number) (up to 2 digits) from 1 to 99 as applicable

**DIMENSIONS** in inches (millimeters)

**DERATING**

 TOLERANCES ON DECIMALS  
 $.XXX \pm 0.005 [x \pm 0.1]$ 

UNLESS OTHERWISE LISTED

RESISTANCE VALUE ( $\mu\Omega$ )	A DIMENSION (inches)	B DIMENSION (inches)	ELEMENT MATERIAL
100	0.040	0.080	Mn-Cu
250	0.059	0.276	Mn-Cu
300	0.051	0.276	Mn-Cu
430	0.038	0.315	Mn-Cu
500	0.033	0.315	Mn-Cu

**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	5x rated power for 5 s	$\pm 0.5 \% \Delta R$
Low temperature storage	-65 °C for 24 h	$\pm 0.5 \% \Delta R$
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"	$\pm 1.0 \% \Delta R$
Moisture resistance	MIL-STD-202, method 106, 0 % power, 7b not required	$\pm 0.5 \% \Delta R$



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