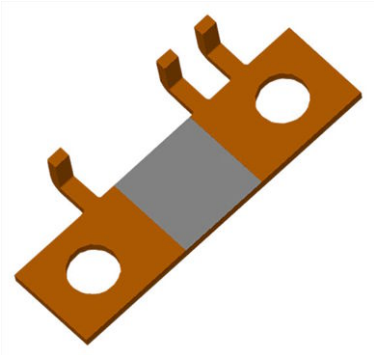
Power Metal Strip® Meter Shunt Resistor, Very Low Value (down to 0.0001 Ω)



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

AUTOMOTIVE GRADE

Pb-free

RoHS COMPLIANT

HALOGEN FREE

GREEN (5-2008)

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	SIZE	POWER RATING $P_{70\,°C}$ W	TOLERANCE %	RESISTANCE VALUE RANGE Ω	RESISTANCE VALUES CURRENTLY AVAILABLE (1) Ω	WEIGHT (typical) g/1000 pieces
WSMS2908	2908	3.0	5.0	50µ to 1000µ	100µ, 250µ, 300µ, 430µ, 500µ	2100

Note

(1) 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	$(P/R)^{1/2}$

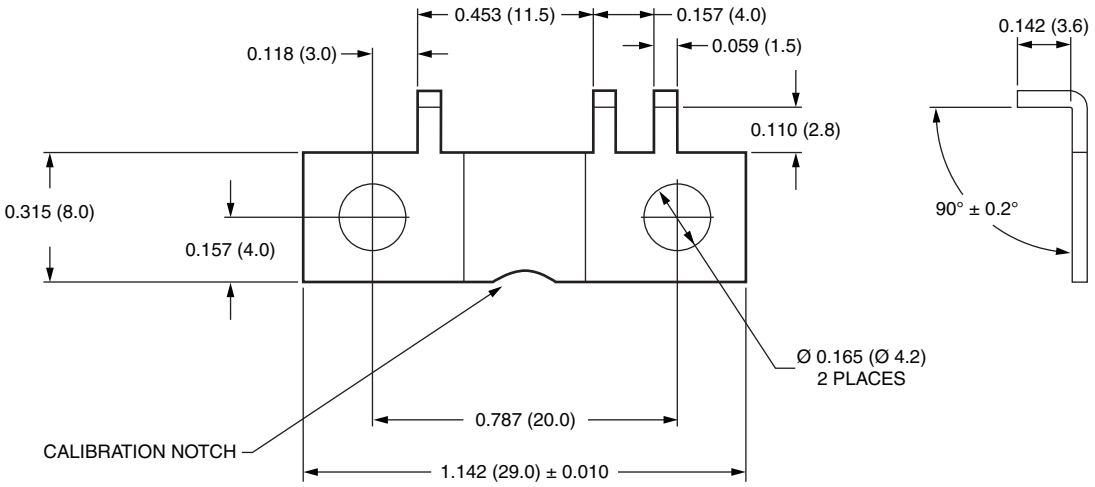
GLOBAL PART NUMBER INFORMATION

GLOBAL PART NUMBERING: WSMS2908L2500JK (WSMS2908, 0.00025 Ω, ± 5 %)

W	S	K	0	6	1	2	1	L	0	0	0	F	E	A		

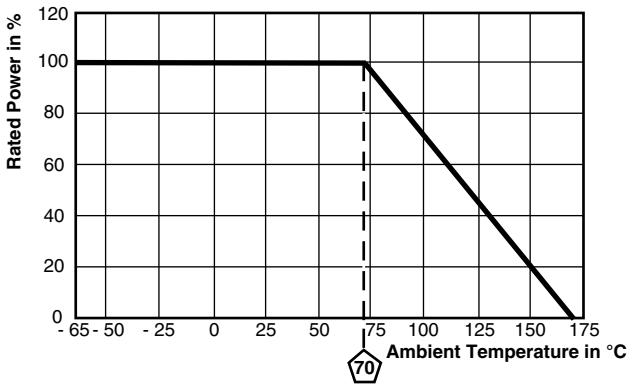
GLOBAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING CODE	SPECIAL
WSMS2908	**L** = mΩ **L1000** = 0.00010 Ω **L2500** = 0.00025 Ω **L3000** = 0.00030 Ω **L4300** = 0.00043 Ω **L5000** = 0.00050 Ω	**J** = ± 5.0 %	**K** = Bulk pack **E** = Tape and reel	(Dash number) (Up to 2 digits) From **1 to 99** as applicable

DIMENSIONS in inches (millimeters)



TERMINAL THICKNESS 0.040 (1.0)
ALL VALUES

DERATING



TOLERANCES ON DECIMALS
XXX ± 0.005

RESISTANCE VALUE (μΩ)	RESISTOR ELEMENT THICKNESS (inches)	ELEMENT LENGTH	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	± 0.5 % Δ*R*
Short Time Overload	5 x rated power for 5 s	± 0.5 % Δ*R*
Low Temperature Operation	- 65 °C for 45 min	± 0.5 % Δ*R*
High Temperature Exposure	1000 h at + 170 °C	± 1.0 % Δ*R*
Bias Humidity	+ 85 °C, 85 % RH, 10 % bias, 1000 h	± 0.5 % Δ*R*
Mechanical Shock	100 *g*'s for 6 ms, 5 pulses	± 0.5 % Δ*R*
Vibration	Frequency varied 10 Hz to 2000 Hz in 1 min, 3 directions, 12 h	± 0.5 % Δ*R*
Load Life	1000 h at + 70 °C, 1.5 h "ON", 0.5 h "OFF"	± 1.0 % Δ*R*
Moisture Resistance	MIL-STD-202, method 106, 0 % power, 7b not required	± 0.5 % Δ*R*

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