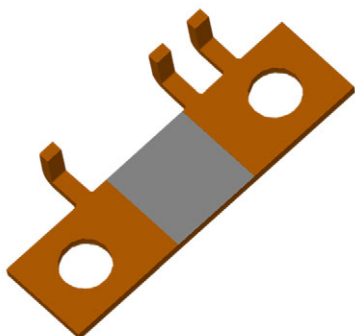




Power Metal Strip® Meter Shunt Resistor, Very Low Value (down to 0.0001 Ω)



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



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 ⁽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: 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

WSMS2908

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 %

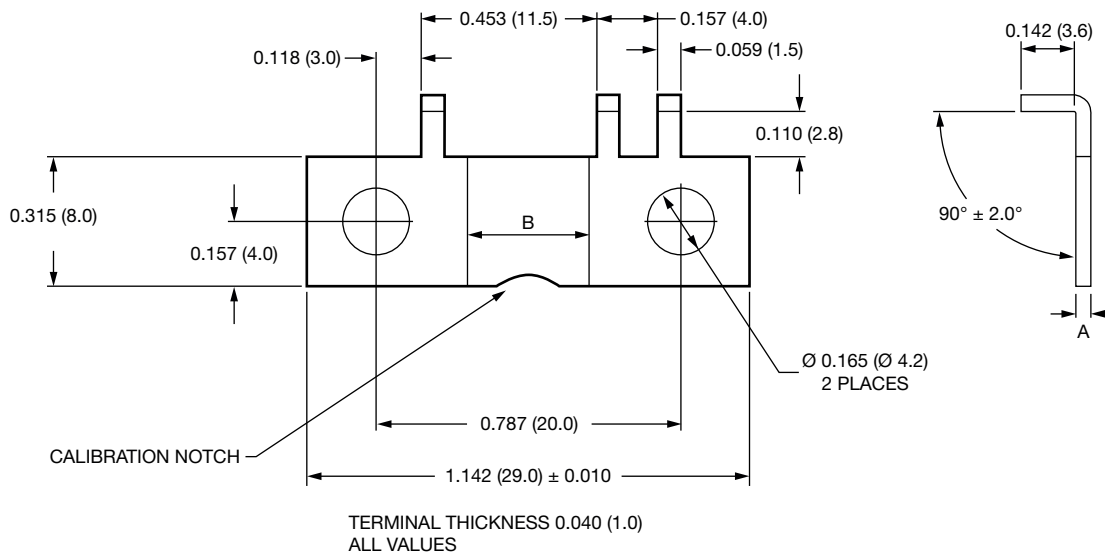
PACKAGING CODE

K = bulk pack
 E = tape and reel

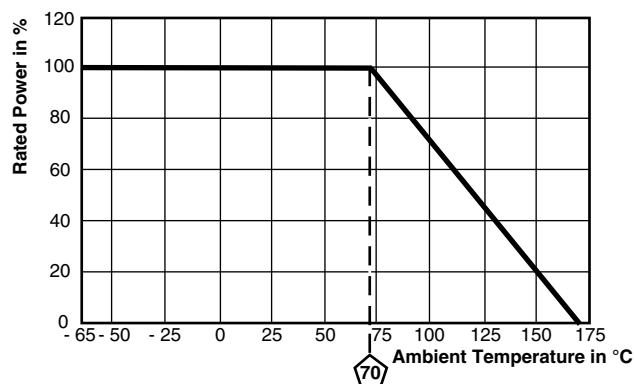
SPECIAL

(dash number)
 (up to 2 digits)
 from 1 to 99 as
 applicable

DIMENSIONS in inches (millimeters)



DERATING



TOLERANCES ON DECIMALS
.XXX ± 0.005 [.x ± 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	± 0.5 % ΔR
Short time overload	5x rated power for 5 s	± 0.5 % ΔR
Low temperature storage	-65 °C for 24 h	± 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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