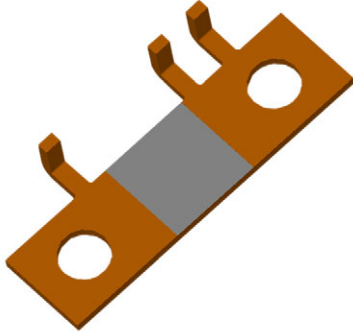




Power Metal Strip® Meter Shunt Resistor, Very Low Value (down to 0.0001 Ω)



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 %

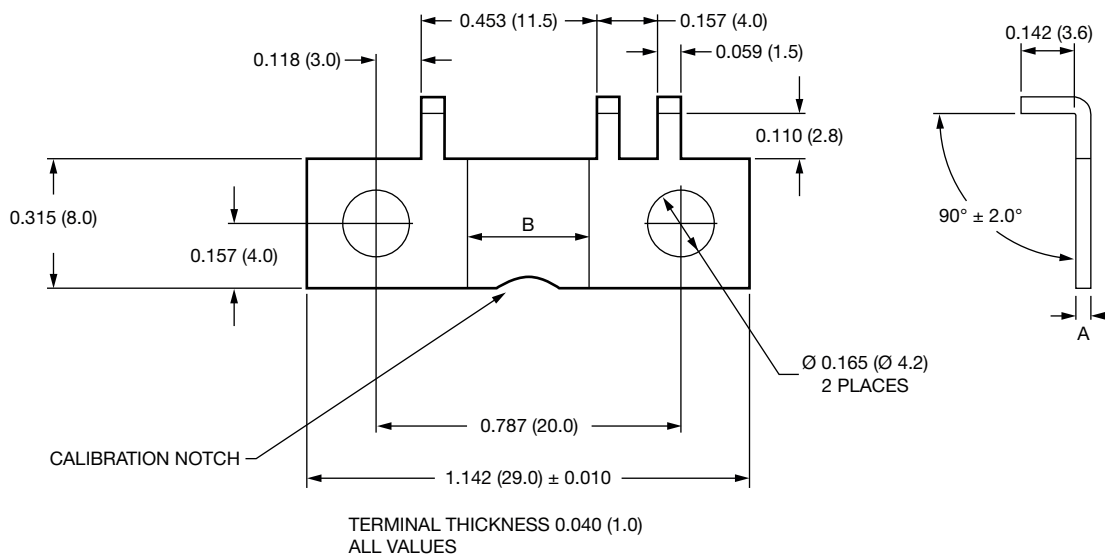
PACKAGING CODE

K = bulk pack
 E = tape and reel

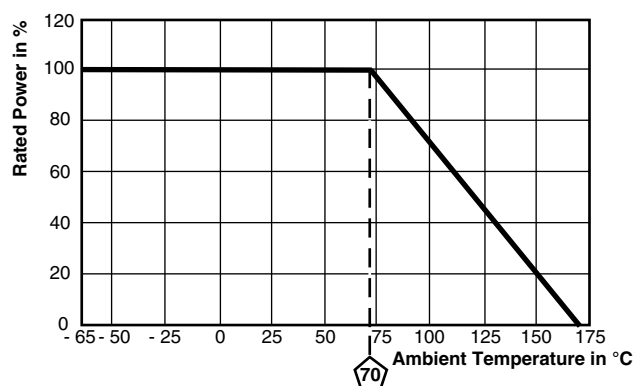
SPECIAL

(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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