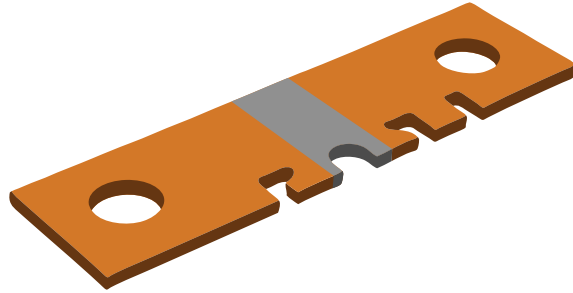




Power Metal Strip® Meter Shunt Resistor, Very Low Value (down to 0.00010 Ohms)



FEATURES

- High power to resistor size ratio
- 4-terminal (Kelvin) connection design
- Proprietary processing technique produces extremely low resistance values
- All welded construction
- Very low inductance (< 0.5 nH)
- Low thermal EMF (< 3 $\mu\text{V}/^\circ\text{C}$)
- PATENT(S): www.vishay.com/patents
- 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
WSMS5515	5515	3.0	5.0	50 μ to 1000 μ	100 μ , 160 μ , 200 μ , 250 μ , 300 μ , 500 μ	7800

Note

⁽¹⁾ Other values may be available, contact factory

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Temperature coefficient	ppm/ $^\circ\text{C}$	± 325 for 100 $\mu\Omega$, ± 225 for 160 $\mu\Omega$, 200 $\mu\Omega$, and 250 $\mu\Omega$, ± 175 for 300 $\mu\Omega$ to 500 $\mu\Omega$
Operating temperature range	$^\circ\text{C}$	-65 to +170
Maximum current rating	A	$(P/R)^{1/2}$

GLOBAL PART NUMBER INFORMATION

GLOBAL PART NUMBERING: WSMS5515L2500JK (WSMS5515, 0.00025 Ω , $\pm 5\%$)

W S M S 5 5 1 5 L 2 5 0 0 J K

GLOBAL MODEL

WSMS5515

RESISTANCE VALUE

L = m Ω
 L1000 = 0.00010 Ω
 L1600 = 0.00016 Ω
 L2000 = 0.00020 Ω
 L2500 = 0.00025 Ω
 L3000 = 0.00030 Ω
 L5000 = 0.00050 Ω

TOLERANCE CODE

J = $\pm 5.0\%$

PACKAGING CODE

K = bulk pack

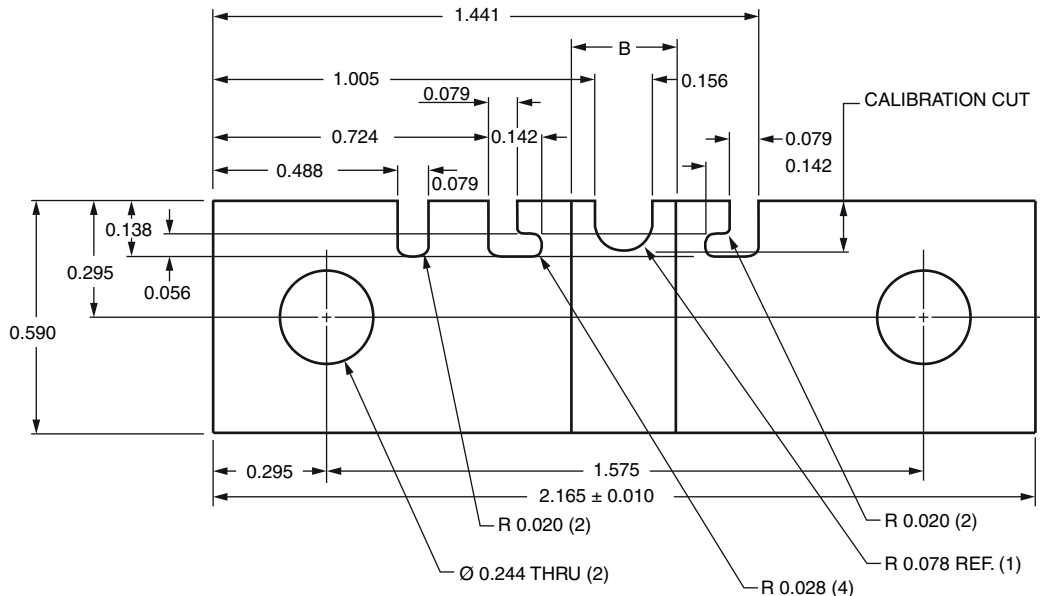
SPECIAL

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

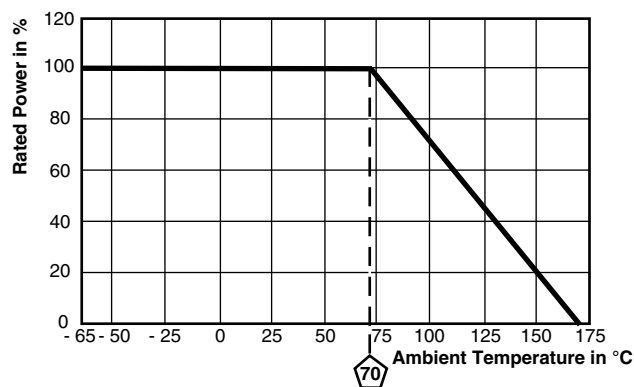
PATENT(S): www.vishay.com/patents

This Vishay product is protected by one or more United States and international patents.

DIMENSIONS in inches



DERATING



TOLERANCES ON DECIMALS
XXX ± 0.005

RESISTANCE VALUE ($\mu\Omega$)	RESISTOR THICKNESS (inches)	B DIMENSION (inches)	ELEMENT MATERIAL
100	0.033	0.116	Mn-Cu
160	0.051	0.276	Mn-Cu
200	0.051	0.276	Mn-Cu
250	0.033	0.276	Mn-Cu
300	0.033	0.276	Mn-Cu
500	0.059	0.276	Fe-Cr

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 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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