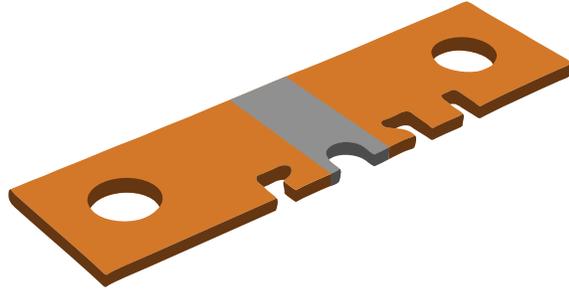


## Power Metal Strip® Meter Shunt Resistor, Very Low Value (down to 0.00010 Ohms)



### 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](http://www.vishay.com/patents)
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://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 $\Omega$	RESISTANCE VALUES CURRENTLY AVAILABLE <sup>(1)</sup> $\Omega$	WEIGHT (typical) g/1000 pieces
WSMS5515	5515	3.0	5.0	50 $\mu$ to 1000 $\mu$	100 $\mu$ , 160 $\mu$ , 200 $\mu$ , 250 $\mu$ , 300 $\mu$ , 500 $\mu$	7800

**Note**

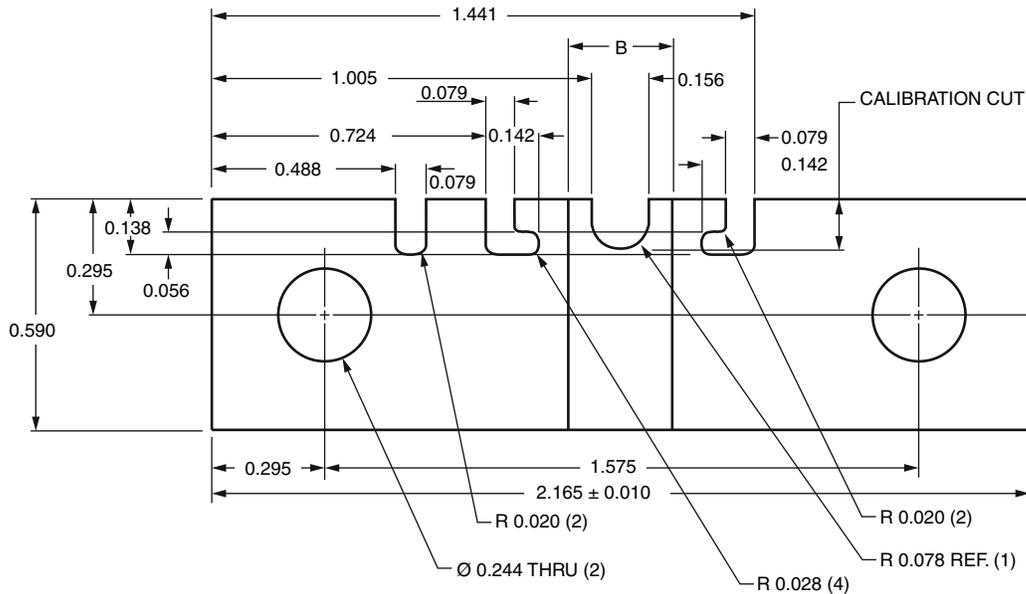
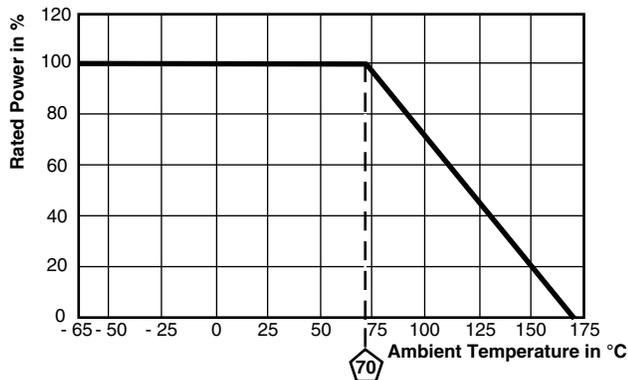
<sup>(1)</sup> Other values may be available, contact factory

TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Temperature coefficient	ppm/ $^\circ\text{C}$	$\pm 325$ for 100 $\mu\Omega$ , $\pm 225$ for 160 $\mu\Omega$ , 200 $\mu\Omega$ , and 250 $\mu\Omega$ , $\pm 175$ 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 $\Omega$ , $\pm 5\%$ )																
W	S	M	S	5	5	1	5	L	2	5	0	0	J	K		
GLOBAL MODEL		RESISTANCE VALUE				TOLERANCE CODE		PACKAGING CODE				SPECIAL				
WSMS5515		L = m $\Omega$ L1000 = 0.00010 $\Omega$ L1600 = 0.00016 $\Omega$ L2000 = 0.00020 $\Omega$ L2500 = 0.00025 $\Omega$ L3000 = 0.00030 $\Omega$ L5000 = 0.00050 $\Omega$				J = $\pm 5.0\%$		K = bulk pack				(Dash number) (Up to 2 digits) From 1 to 99 as applicable				

PATENT(S): [www.vishay.com/patents](http://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 (μΩ)	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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