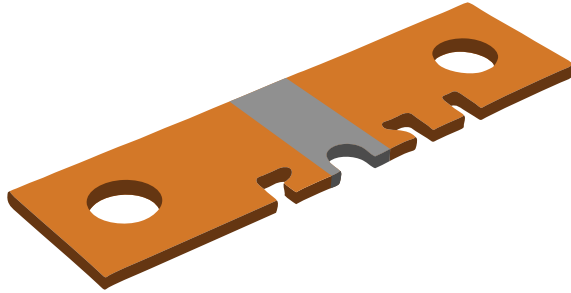


## Power Metal Strip® Meter Shunt Resistor, Very Low Value (down to 0.00010 Ohms)



### 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  $\mu$ V/°C)
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
**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/°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	°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

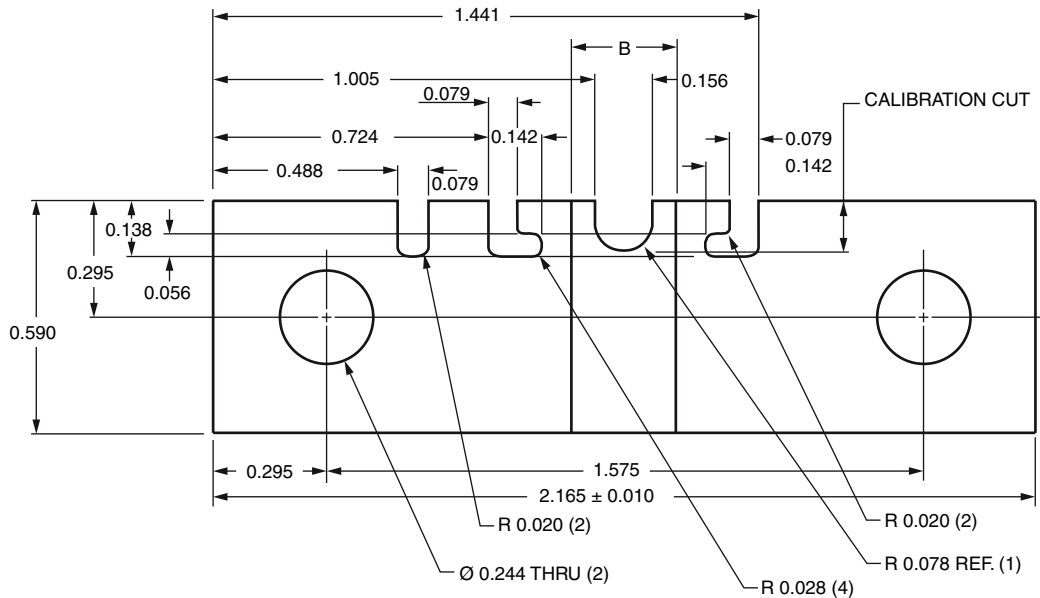
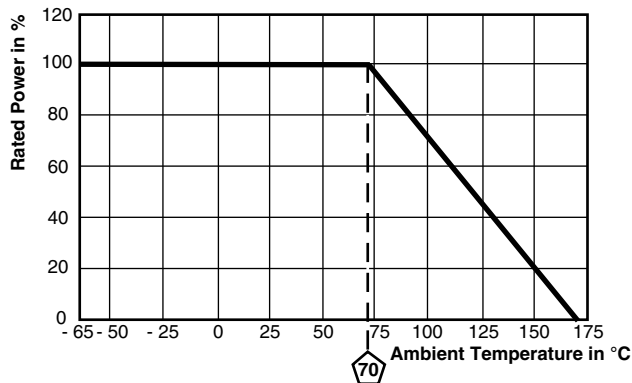
GLOBAL MODEL  
**WSMS5515**

RESISTANCE VALUE  
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  $\Omega$

TOLERANCE CODE  
J =  $\pm 5.0\%$

PACKAGING CODE  
K = Bulk pack

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

**DIMENSIONS** in inches

**DERATING**

 TOLERANCES ON DECIMALS  
 XXX ± 0.005

RESISTANCE VALUE (μΩ)	RESISTOR THICKNESS (inches)	ELEMENT MATERIAL
100	0.033	Mn-Cu
160	0.051	Mn-Cu
200	0.051	Mn-Cu
250	0.033	Mn-Cu
300	0.033	Mn-Cu
500	0.059	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	5 x 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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