

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



### KEY BENEFITS

- Very low resistance values: 100 μΩ, 160 μΩ, 200 μΩ, 250 μΩ, 300 μΩ, 500 μΩ
- 3 W power capability in 5515 package
- Offers 4-terminal (Kelvin) connection design
- All-welded construction

### APPLICATIONS

- Industrial power meters (three-phase and polyphase)
- Consumer power meters (single-phase and polyphase)

### RESOURCES

- Datasheet: WSMS5515 - <http://www.vishay.com/doc?30135>
- For technical questions contact [ww2cresistors@vishay.com](mailto:ww2cresistors@vishay.com)

# POWER METAL STRIP® RESISTOR

## WSMS5515

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

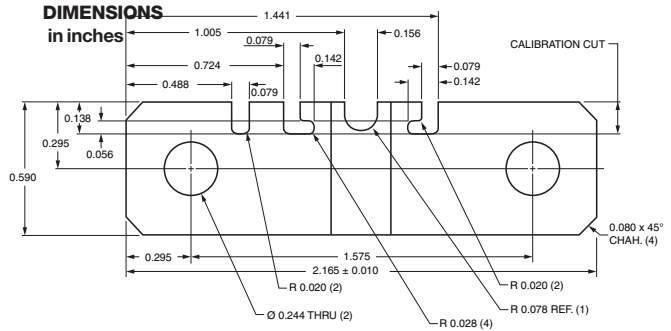


#### FEATURES

- 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 μV/°C)
- Compliant to RoHS directive 2002/95/EC



**RoHS**  
COMPLIANT  
**GREEN**  
(5-2009)\*\*



STANDARD ELECTRICAL SPECIFICATIONS						
GLOBAL MODEL	SIZE	POWER RATING <i>P</i> <sub>70 °C</sub> W	TOLERANCE %	RESISTANCE VALUE RANGEΩ	RESISTANCE VALUES CURRENTLY AVAILABLE (1) Ω	WEIGHT (typical)g/1000 pieces
WSMS5515	5515	3.0	5.0	50μ to 1000μ	100μ, 160μ, 200μ, 250μ, 300μ, 500μ	7800

**Note**

(1) Other values may be available, contact factory

TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/°C	± 325 for 100 μΩ, ± 225 for 160 μΩ, 200 μΩ, and 250 μΩ, ± 175 for 300 μΩ to 500 μΩ
Operating Temperature Range	°C	- 65 to + 170
Maximum Current Rating	A	( <i>P/R</i> ) <sup>1/2</sup>

GLOBAL PART NUMBER INFORMATION				
GLOBAL PART NUMBERING: WSMS5515L2500JK (WSMS5515, 0.00025 Ω, ± 5 %)				
W	S	M	S	5 5 1 5 L 2 5 0 0 J K
GLOBAL MODEL <b>WSMS5515</b>	RESISTANCE VALUE L = mΩ 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 = ± 5.0 %	PACKAGING CODE K = Bulk pack	SPECIAL (Dash number) (Up to 2 digits) From 1 to 99 as applicable

PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Thermal Shock	- 55 °C to + 150 °C, 1000 cycles, 15 min at each extreme	± 0.5 % Δ <i>R</i>
Short Time Overload	5 x rated power for 5 s	± 0.5 % Δ <i>R</i>
Low Temperature Operation	- 65 °C for 45 min	± 0.5 % Δ <i>R</i>
High Temperature Exposure	1000 h at + 170 °C	± 1.0 % Δ <i>R</i>
Bias Humidity	+ 85 °C, 85 % RH, 10 % bias, 1000 h	± 0.5 % Δ <i>R</i>
Mechanical Shock	100 g's for 6 ms, 5 pulses	± 0.5 % Δ <i>R</i>
Vibration	Frequency varied 10 Hz to 2000 Hz in 1 min, 3 directions, 12 h	± 0.5 % Δ <i>R</i>
Load Life	1000 h at + 70 °C, 1.5 h "ON", 0.5 h "OFF"	± 1.0 % Δ <i>R</i>
Moisture Resistance	MIL-STD-202, method 106, 0 % power, 7b not required	± 0.5 % Δ <i>R</i>

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