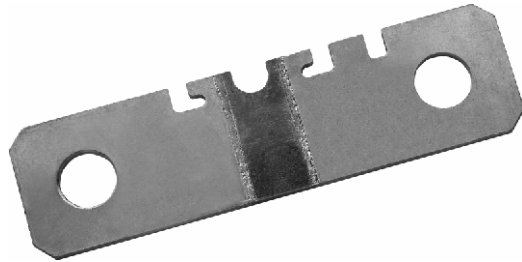


Power Metal Strip® Meter Shunt Resistor, Very Low Value (down to 0.00010 Ω)



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> _{70 °C} 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

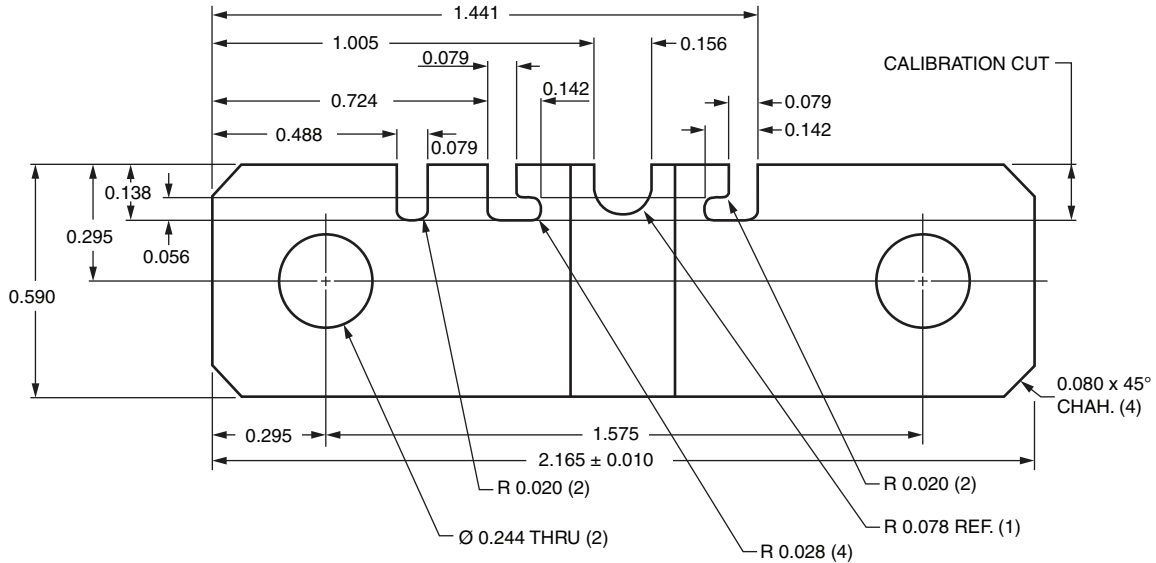
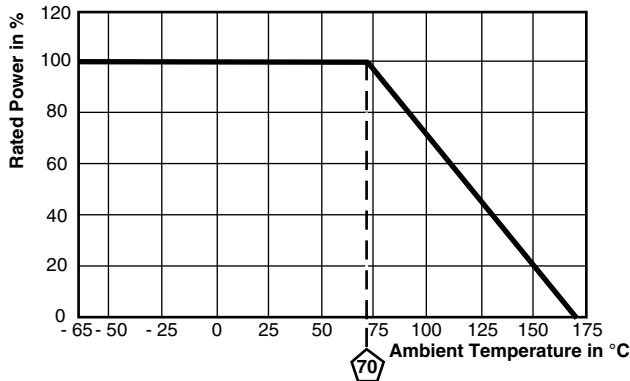
| TECHNICAL SPECIFICATIONS | | |
|-----------------------------|--------|---|
| PARAMETER | UNIT | RESISTOR CHARACTERISTICS |
| Temperature Coefficient | ppm/°C | ± 325 for 100 μΩ, ± 225 for 160 μΩ, 200 μΩ, and 250 μΩ, ± 175 for 300 μΩ to 500 μΩ |
| Operating Temperature Range | °C | - 65 to + 170 |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

| 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 WSMS5515 | | 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 | | | | | |

** Please see document "Vishay Material Category Policy": www.vishay.com/doc?99902

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

Vishay Dale

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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