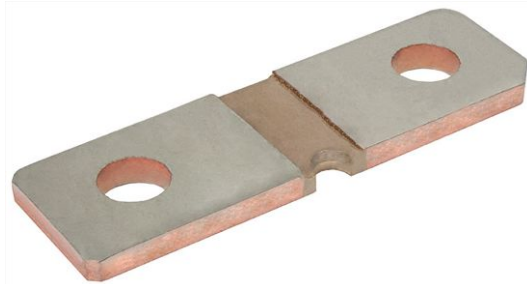


Power Metal Strip® Battery Shunt Resistor, Very Low Value (100 μΩ), Sn Plated


DESIGN SUPPORT TOOLS
[click logo to get started](#)
3D
Models
Available

FEATURES

- High power to resistor size ratio
- Sn plating assists with PCB mounting and corrosion protection
- Proprietary processing technique produces extremely low resistance values
- All welded construction
- Solid metal manganese-copper alloy resistive element with low TCR (< 20 ppm/°C)
- Very low inductance (< 5 nH)
- Low thermal EMF (< 1 μV/°C)
- AEC-Q200 qualified
- 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 $P_{70\text{ }^\circ\text{C}}$ W | TOLERANCE ± % | RESISTANCE VALUE RANGE Ω | RESISTANCE VALUES CURRENTLY AVAILABLE ⁽¹⁾ Ω | WEIGHT (typical) g |
|---------------|------|---|------------------|--------------------------------|--|--------------------------|
| WSBS5216...14 | 5216 | 12 | 5, 10 | 50μ to 250μ | 100μ | 19.2 |

Note
⁽¹⁾ Other values may be available, contact factory

TECHNICAL SPECIFICATIONS

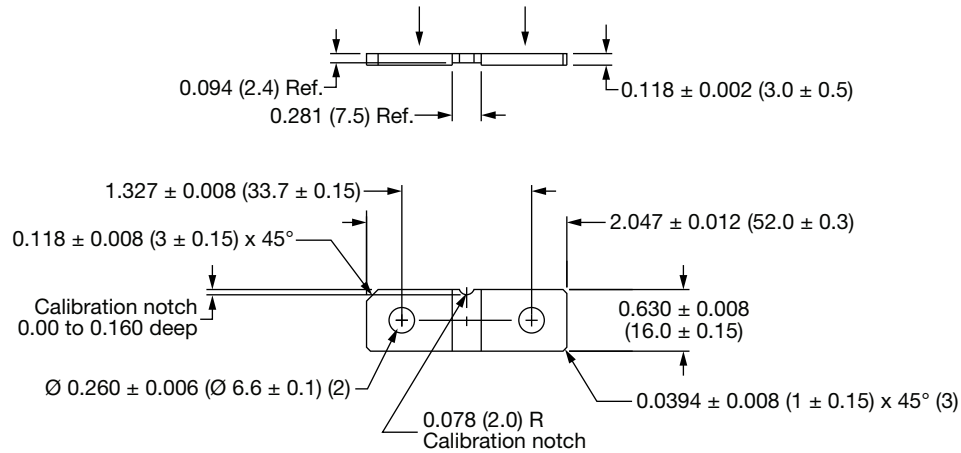
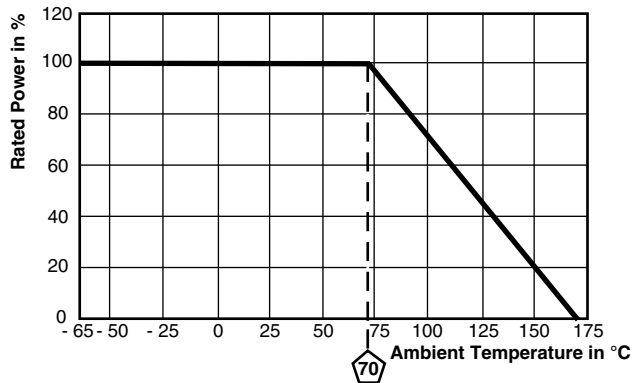
| PARAMETER | UNIT | RESISTOR CHARACTERISTICS |
|--|--------|--------------------------|
| Temperature coefficient | ppm/°C | ± 150 |
| Temperature coefficient (element material) | ppm/°C | ± 20 |
| Operating temperature range | °C | -65 to +170 |
| Thermal EMF | μV/°C | < 1 for 100 μΩ |
| Inductance | nH | < 5 |
| Maximum continuous current rating | A | $(P/R)^{1/2}$ |

GLOBAL PART NUMBER INFORMATION
GLOBAL PART NUMBERING: WSBS5216L1000JT14 (WSBS5216-14, 0.000100 Ω, ± 5.0 %, tray pack)

| | | | | | | | | | | | | | | | | | | | |
|--------------|---|---|---|------------------------------|---|---|---|-------------------------|---|---|---|--------------------------------|---|---|---|-------------------------|--|--|--|
| W | S | B | S | 5 | 2 | 1 | 6 | L | 1 | 0 | 0 | 0 | J | T | 1 | 4 | | | |
| GLOBAL MODEL | | | | RESISTANCE VALUE | | | | TOLERANCE CODE | | | | PACKAGING CODE | | | | SPECIAL | | | |
| WSBS5216 | | | | L = mΩ L1000 = 0.000100 Ω | | | | J = ± 5 % K = ± 10 % | | | | K = bulk pack T = tray pack | | | | 14 = special Sn plating | | | |

DIMENSIONS in inches (millimeters)

Plating on top / bottom is Sn 2.5 μm to 8.0 μm over Ni 0.5 μm to 4.0 μm, punched edges are not plated


DERATING


TOLERANCES ON DECIMALS
XXX ± 0.005
UNLESS OTHERWISE LISTED

| RESISTANCE VALUE (μΩ) | ELEMENT MATERIAL |
|-----------------------|------------------|
| 100 | Mn-Cu |

| 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 | 10x rated power for 5 s | ± 0.5 % ΔR |
| Low temperature storage | -65 °C for 24 h | ± 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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