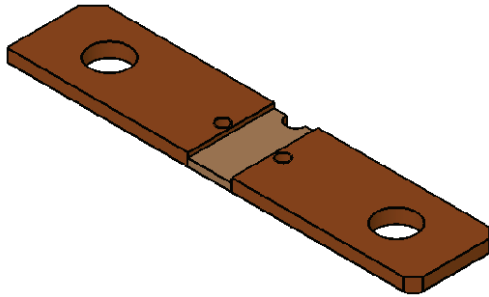


Power Metal Strip® Battery Shunt Resistor With M3 Tapped Holes Very Low Value (50 μΩ, 100 μΩ, 125 μΩ, and 250 μΩ)



FEATURES

- High power to resistor size ratio
- Proprietary processing technique produces extremely low resistance values
- All welded construction
- Very low inductance (< 5 nH)
- Low thermal EMF (< 3 μV/°C)
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

DESIGN SUPPORT TOOLS click logo to get started



| STANDARD ELECTRICAL SPECIFICATIONS | | | | | | |
|------------------------------------|------|---|------------------|--------------------------------|--|---|
| GLOBAL MODEL | SIZE | POWER RATING $P_{70^\circ\text{C}}$ W | TOLERANCE ± % | RESISTANCE VALUE RANGE Ω | RESISTANCE VALUES CURRENTLY AVAILABLE ⁽¹⁾ Ω | WEIGHT (typical) g |
| WSBS8518...M3 | 8518 | 36 | 5, 10 | 50μ to 250μ | 50μ, 100μ, 125μ, 250μ | 50μ = 37.9, 100μ / 125μ = 36.5, 250μ = 33.7 |

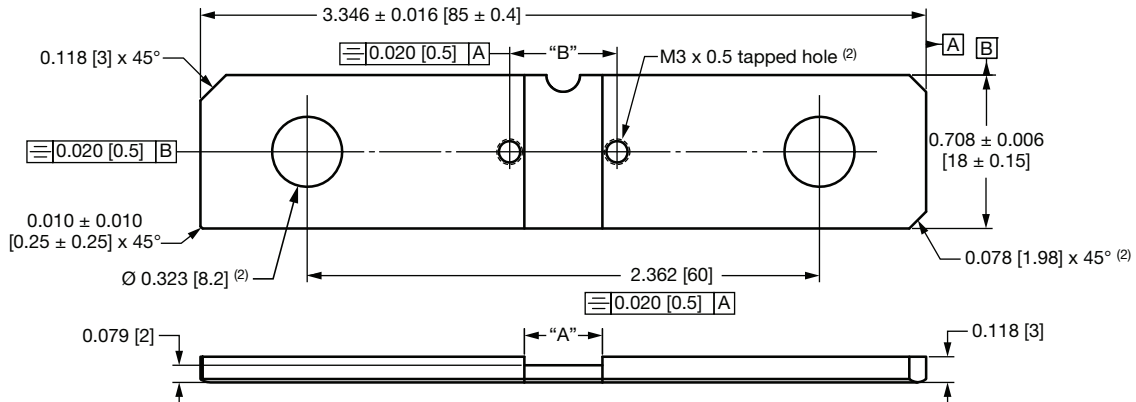
Note

⁽¹⁾ Other values may be available, contact factory

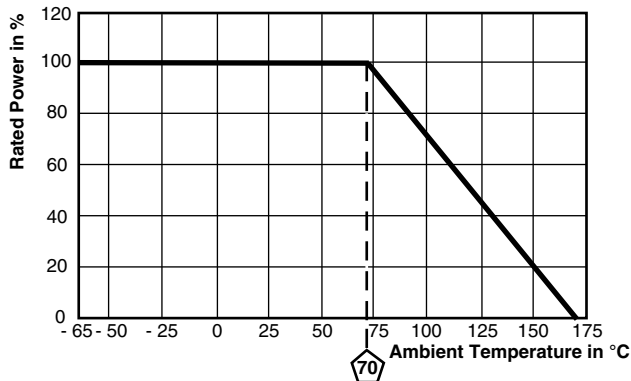
| TECHNICAL SPECIFICATIONS | | |
|--|--------|---------------------------|
| PARAMETER | UNIT | RESISTOR CHARACTERISTICS |
| Temperature coefficient | ppm/°C | ± 200 for 50 μΩ |
| | | ± 175 for 100 μΩ / 125 μΩ |
| | | ± 110 for 250 μΩ |
| Temperature coefficient (element material) | ppm/°C | ± 20 |
| Operating temperature range | °C | -65 to +170 |
| Maximum current rating | A | $(P/R)^{1/2}$ |

| GLOBAL PART NUMBER INFORMATION | | | | | | | | | | | | | | | |
|--|---|--|---|---|---|-------------------------|---|--------------------------------|---|---|----------------------|---|---|---|---|
| GLOBAL PART NUMBERING: WSBS8518L1000JTM3 (WSBS8518-M3, 0.000100 Ω, ± 5 %, tray pack) | | | | | | | | | | | | | | | |
| W | S | B | S | 8 | 5 | 1 | 8 | L | 1 | 0 | 0 | J | T | M | 3 |
| GLOBAL MODEL | | RESISTANCE VALUE | | | | TOLERANCE CODE | | PACKAGING CODE | | | SPECIAL | | | | |
| WSBS8518 | | L = mΩ L0500 = 0.000050 Ω L1000 = 0.000100 Ω L1250 = 0.000125 Ω L2500 = 0.000250 Ω | | | | J = ± 5 % K = ± 10 % | | K = bulk pack T = tray pack | | | M3 = M3 tapped holes | | | | |

DIMENSIONS in inches (millimeters)



DERATING



TOLERANCES ON DECIMALS
 .xxx ± 0.005 [x ± 0.1]
 UNLESS OTHERWISE LISTED

| RESISTANCE VALUE (μΩ) | ELEMENT MATERIAL | A REFERENCE | B ± 0.005 [± 0.13] |
|-----------------------|------------------|---------------|--------------------|
| 50 | Mn-Cu | 0.145 [3.7] | 0.281 [7.1] |
| 100 | Mn-Cu | 0.360 [9.1] | 0.495 [12.6] |
| 125 | Mn-Cu | 0.454 [11.5] | 0.590 [15.0] |
| 250 | Mn-Cu | 0.900 [22.86] | 1.036 [26.3] |

| 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 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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