



Power Metal Strip® Battery Shunt Resistor, Very Low Value (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)
- AEC-Q200 qualified
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

AUTOMOTIVE GRADE



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/1000 pieces |
| WSBS8518 | 8518 | 36 | 5.0 | 50μ to 1000μ | 100μ, 125μ, 250μ | 46 300 |

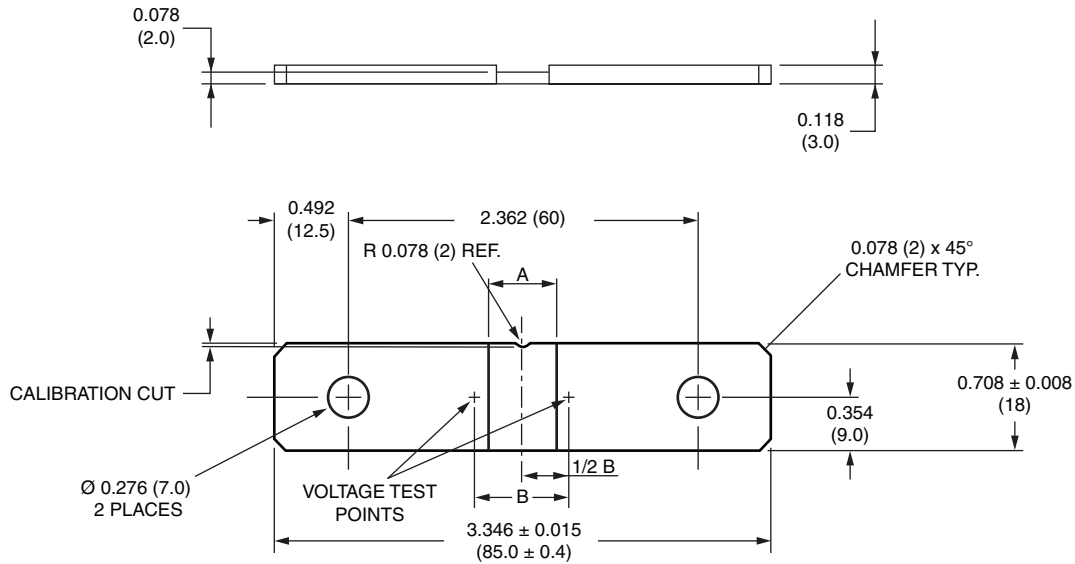
Note

⁽¹⁾ Other values may be available, contact factory

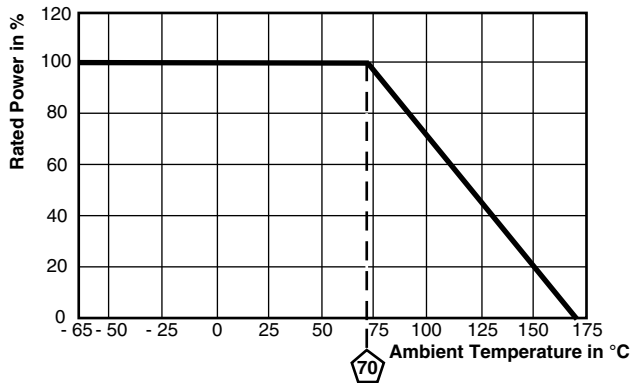
| TECHNICAL SPECIFICATIONS | | |
|-----------------------------|--------|--------------------------|
| PARAMETER | UNIT | RESISTOR CHARACTERISTICS |
| Temperature Coefficient | ppm/°C | ± 225 |
| Operating Temperature Range | °C | - 65 to + 170 |
| Maximum Current Rating | A | (P/R) ^{1/2} |

| GLOBAL PART NUMBER INFORMATION | | | | | | | | | | | | | | | | |
|--|---|--|---|---|---|----------------|---|----------------|---|---|---|---|---|---|--|--|
| GLOBAL PART NUMBERING: WSBS8518L1250JK (WSBS8518, 0.000125 Ω, ± 5 %) | | | | | | | | | | | | | | | | |
| W | S | B | S | 8 | 5 | 1 | 8 | L | 1 | 2 | 5 | 0 | J | K | | |
| GLOBAL MODEL | | RESISTANCE VALUE | | | | TOLERANCE CODE | | PACKAGING CODE | | | | SPECIAL | | | | |
| WSBS8518 | | L = mΩ L1000 = 0.000100 Ω L1250 = 0.000125 Ω L2500 = 0.000250 Ω | | | | J = ± 5.0 % | | K = Bulk pack | | | | (Dash number) (Up to 2 digits) From 1 to 99 as applicable | | | | |

DIMENSIONS in inches (millimeters)



DERATING



TOLERANCES ON DECIMALS
XXX ± 0.005
UNLESS OTHERWISE LISTED

| RESISTANCE VALUE ($\mu\Omega$) | ELEMENT MATERIAL | DIMENSION A (inches) | DIMENSION B (inches) |
|----------------------------------|------------------|----------------------|----------------------|
| 100 | Mn-Cu | 0.37 | 0.495 ± 0.005 |
| 125 | Mn-Cu | 0.48 | 0.605 ± 0.005 |
| 250 | Mn-Cu | 0.90 | 1.025 ± 0.005 |

| 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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