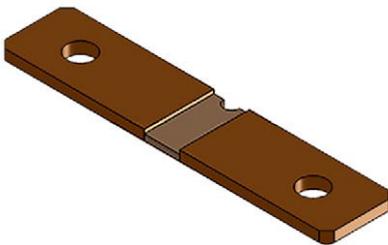


Power Metal Strip® Battery Shunt Resistor, Very Low Value (50 $\mu\Omega$, 100 $\mu\Omega$, 125 $\mu\Omega$, and 250 $\mu\Omega$)



ADDITIONAL RESOURCES



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 (as low as < 1 $\mu\text{V}/^\circ\text{C}$)
- AEC-Q200 qualified
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(S-2008)

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	SIZE	POWER RATING $P_{70^\circ\text{C}}$ W	TOLERANCE \pm %	RESISTANCE VALUE RANGE ⁽¹⁾ Ω	RESISTANCE VALUES CURRENTLY AVAILABLE ⁽²⁾ Ω	WEIGHT (typical) g
WSBS8518	8518	36	5, 10	50 μ to 1000 μ	50 μ , 100 μ , 125 μ , 250 μ	50 μ = 37.9, 100 μ / 125 μ = 36.5, 250 μ = 33.7

Notes

(1) Please reference WSBS8518...34 datasheet (www.vishay.com/doc?30354) for resistance values 500 $\mu\Omega$ to 1000 $\mu\Omega$
(2) Other values may be available, contact factory

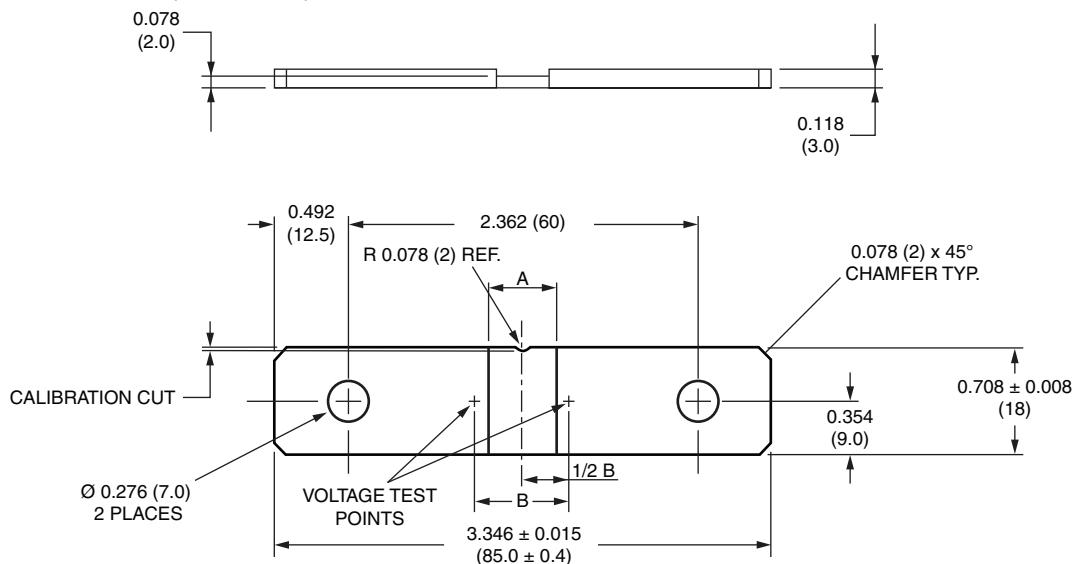
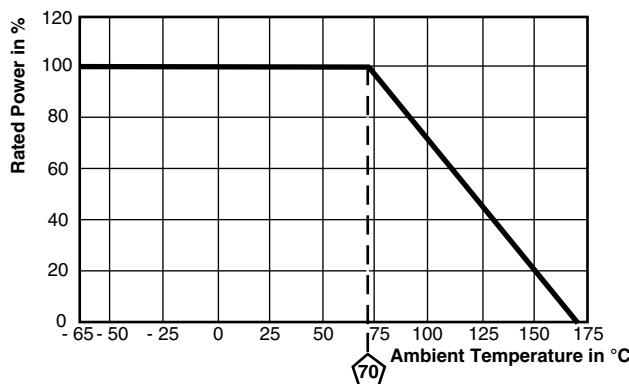
TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Temperature coefficient	ppm/ $^\circ\text{C}$	± 200 for 50 $\mu\Omega$
		± 175 for 100 $\mu\Omega$, 125 $\mu\Omega$
		± 110 for 250 $\mu\Omega$
Temperature coefficient (element material)	ppm/ $^\circ\text{C}$	± 20
Operating temperature range	$^\circ\text{C}$	-65 to +170
Thermal EMF	$\mu\text{V}/^\circ\text{C}$	< 1 for 50 $\mu\Omega$ and < 3 for 100 $\mu\Omega$, 125 $\mu\Omega$, 250 $\mu\Omega$
Maximum current rating	A	(P/R) ^{1/2}

GLOBAL PART NUMBER INFORMATION

GLOBAL PART NUMBERING: WSBS8518L1250JK (WSBS8518, 0.000125 Ω , ± 5 %, bulk pack)

W	S	B	S	8	5	1	8	L	1	2	5	0	J	K	
GLOBAL MODEL				RESISTANCE VALUE				TOLERANCE CODE				PACKAGING CODE			
WSBS8518				$L = \text{m}\Omega$ L0500 = 0.000050 Ω L1000 = 0.000100 Ω L1250 = 0.000125 Ω L2500 = 0.000250 Ω				$J = \pm 5$ % $K = \pm 10$ %				K = bulk pack T = tray pack			
												SPECIAL (dash number) (up to 2 digits) from 1 to 99 as applicable			

DIMENSIONS in inches (millimeters)

DERATING

TOLERANCES ON DECIMALS
 $.xxx \pm 0.005$ [$x \pm 0.1$]

UNLESS OTHERWISE LISTED

RESISTANCE VALUE ($\mu\Omega$)	ELEMENT MATERIAL	A REFERENCE	B ± 0.005 [± 0.13]
50	Mn-Cu	0.145 [3.68]	0.270 [8.71]
100	Mn-Cu	0.370 [9.40]	0.495 [12.57]
125	Mn-Cu	0.480 [12.19]	0.605 [15.37]
250	Mn-Cu	0.900 [22.86]	1.025 [26.04]

PERFORMANCE

TEST	CONDITIONS OF TEST	TEST LIMITS
Thermal shock	-55 °C to +150 °C, 1000 cycles, 15 min at each extreme	$\pm 0.5\% \Delta R$
Short time overload	5 x rated power for 5 s	$\pm 0.5\% \Delta R$
Low temperature storage	-65 °C for 24 h	$\pm 0.5\% \Delta R$
High temperature exposure	1000 h at +170 °C	$\pm 1.0\% \Delta R$
Bias humidity	+85 °C, 85 % RH, 10 % bias, 1000 h	$\pm 0.5\% \Delta R$
Mechanical shock	100 g's for 6 ms, 5 pulses	$\pm 0.5\% \Delta R$
Vibration	Frequency varied 10 Hz to 2000 Hz in 1 min, 3 directions, 12 h	$\pm 0.5\% \Delta R$
Load life	1000 h at +70 °C, 1.5 h "ON", 0.5 h "OFF"	$\pm 1.0\% \Delta R$
Moisture resistance	MIL-STD-202, method 106, 0 % power, 7b not required	$\pm 0.5\% \Delta R$

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