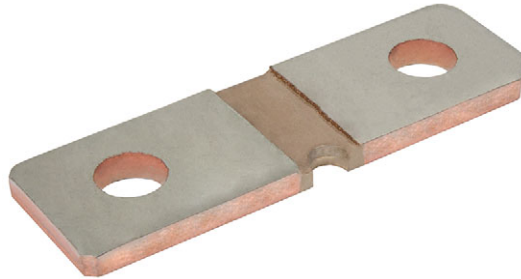


## Power Metal Strip® Battery Shunt Resistor, Very Low Value (100 μΩ), Sn Plated



### 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](http://www.vishay.com/doc?99912)



### LINKS TO ADDITIONAL RESOURCES



### STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	SIZE	POWER RATING $P_{70\text{ }^\circ\text{C}}$ W	TOLERANCE ± %	RESISTANCE VALUE RANGE Ω	RESISTANCE VALUES CURRENTLY AVAILABLE <sup>(1)</sup> Ω	WEIGHT (typical) g
WSBS5216...14	5216	12	5, 10	50μ to 250μ	100μ	19.2

#### Note

<sup>(1)</sup> Other values may be available, contact factory

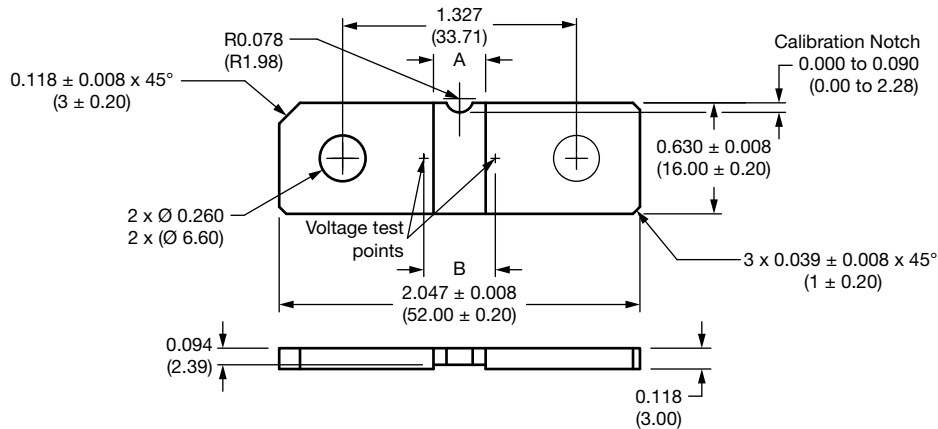
### TECHNICAL SPECIFICATIONS

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			

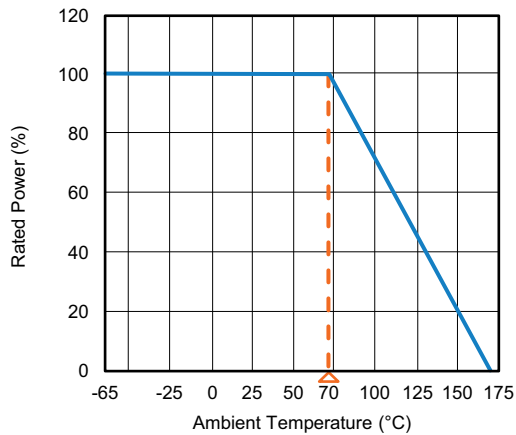
**DIMENSIONS** in inches (millimeters)

**Note**

- Plating on top / bottom is Sn 2.5  $\mu\text{m}$  to 8.0  $\mu\text{m}$  over Ni 0.5  $\mu\text{m}$  to 4.0  $\mu\text{m}$ , edges are not plated

RESISTANCE VALUE ( $\mu\Omega$ )	ELEMENT MATERIAL	A REFERENCE	B $\pm 0.005$ ( $\pm 0.13$ )
100	Mn-Cu	0.281 (7.14)	0.406 (10.31)

 TOLERANCES ON DECIMALS  
 XXX  $\pm 0.005$ 

UNLESS OTHERWISE LISTED

**DERATING**

**PULSE CAPABILITY**

[www.vishay.com/en/resistors/joulewizard/](http://www.vishay.com/en/resistors/joulewizard/)

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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