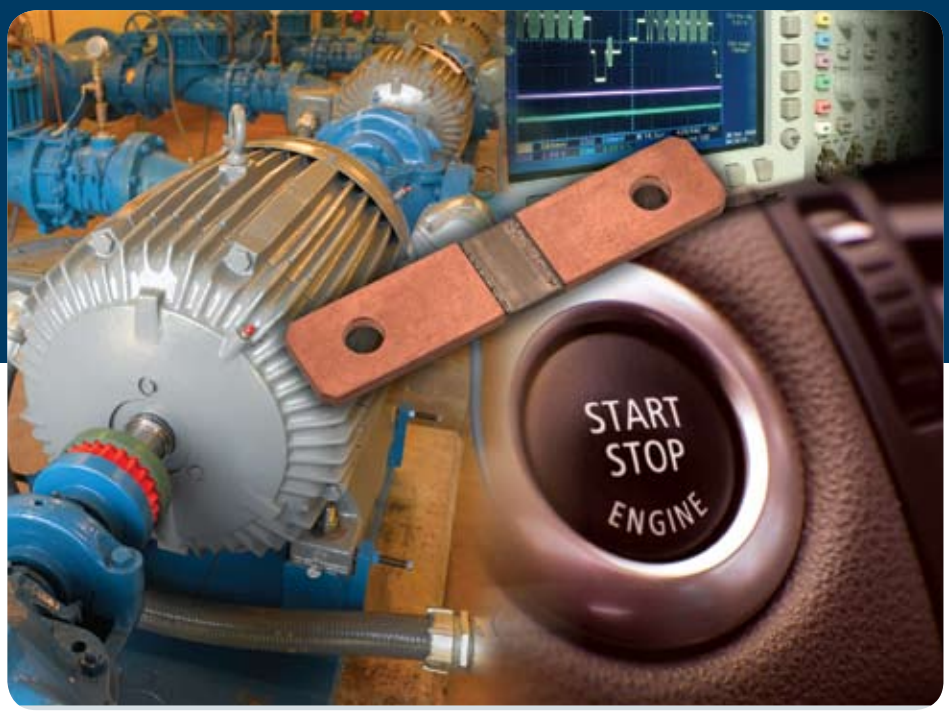
RESISTORS

WSBS8518



Power Metal Strip® Battery Shunt Resistor

FEATURES

- Very low resistance values: 100 µΩ and 125 µΩ
- 36-W (600 A) power capability in an 8518 package
- Very low inductance: < 5 nH
- Low thermal EMF: < 3 µV / °C
- All-welded construction
- RoHS-compliant, lead (Pb)-free construction

APPLICATIONS

- Automotive battery management
- Automotive hybrid and electric vehicle power management
- Industrial high-power DC motor control
- Instrumentation high-current measurement

Datasheet is available on our web site at www.vishay.com
for WSBS8518 - http://www.vishay.com/docs/30134/wsbs8518.pdf

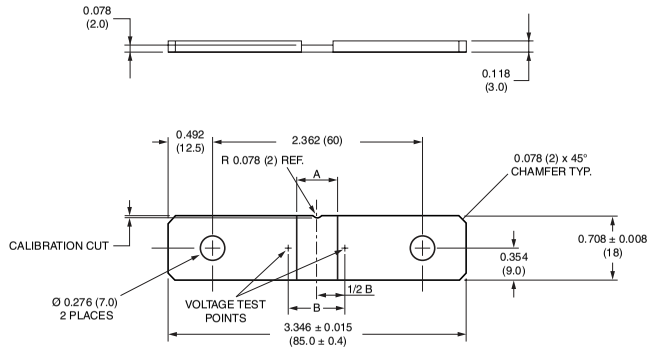
Power Metal Strip® Battery Shunt Resistor, Very Low Value (100 µΩ, 125 µΩ and 250 µΩ)

FEATURES

- High power to resistor size ratio
- Proprietary processing technique produces extremely low resistance values
- All welded construction
- RoHS compliant, lead (Pb)-free construction
- Very low inductance (< 5 nH)
- Excellent frequency response to 50 MHz
- Low thermal EMF (< 3 µV/°C)

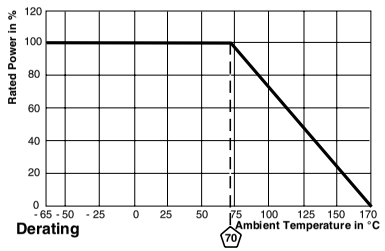
Pb-free
RoHS COMPLIANT

DIMENSIONS in inches (millimeters)



STANDARD ELECTRICAL SPECIFICATIONS				
GLOBAL MODEL	POWER RATING $P_{70\,°C}$ W	TOLERANCE %	RESISTANCE VALUE µΩ	WEIGHT (Typical) g
WSBS8518	36	5.0	100, 125, 250	46.3

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



TOLERANCES ON DECIMALS
XXX ± 0.005

UNLESS OTHER WISE LISTED

RESISTANCE VALUE (µΩ)	ELEMENT MATERIAL	DIMENSION A	DIMENSION B
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

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 - 99** as applicable

PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Thermal Shock	- 55 °C to + 150 °C, 1000 cycles, 15 min at each extreme	± 0.5 % Δ*R*
Short Time Overload	5 x rated power for 5 s	± 0.5 % Δ*R*
Low Temperature Operation	- 65 °C for 45 min	± 0.5 % Δ*R*
High Temperature Exposure	1000 h at + 170 °C	± 1.0 % Δ*R*
Bias Humidity	+ 85 °C, 85 % RH, 10 % Bias, 1000 h	± 0.5 % Δ*R*
Mechanical Shock	100 g's for 6 ms, 5 pulses	± 0.5 % Δ*R*
Vibration	Frequency varied 10 to 2000 Hz in 1 min, 3 directions, 12 h	± 0.5 % Δ*R*
Load Life	1000 h at + 70 °C, 1.5 h "ON", 0.5 h "OFF"	± 1.0 % Δ*R*
Moisture Resistance	MIL-STD-202, Method 106, 0 % power, 7b not required	± 0.5 % Δ*R*

Revision 28-Jan-09