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Vishay Dale

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



DESIGN TOOLS (click logo to get started)



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 μV/°C)
- AEC-Q200 qualified
- Material categorization: for definitions of compliance please see www.vishav.com/doc?99912





ROHS COMPLIANT HALOGEN

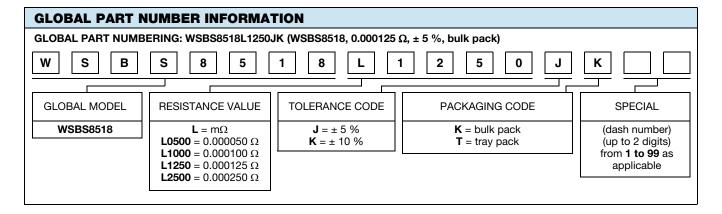
> GREEN (5-2008)

STANDAR	TANDARD ELECTRICAL SPECIFICATIONS							
GLOBAL MODEL	SIZE	POWER RATING P _{70 °C} W	TOLERANCE ± %	RESISTANCE VALUE RANGE $^{(1)}$ Ω	RESISTANCE VALUES CURRENTLY AVAILABLE (2)	WEIGHT (typical) g		
WSBS8518	8518	36	5, 10	50μ to 1000μ	50μ, 100μ, 125μ, 250μ	$50\mu = 37.9,$ $100\mu / 125u = 36.5,$ $250\mu = 33.7$		

Notes

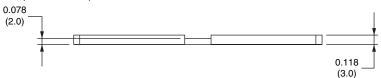
- (1) Please reference WSBS8518...34 datasheet (<u>www.vishay.com/doc?30354</u>) for resistance values 500 $\mu\Omega$ to 1000 $\mu\Omega$
- (2) Other values may be available, contact factory

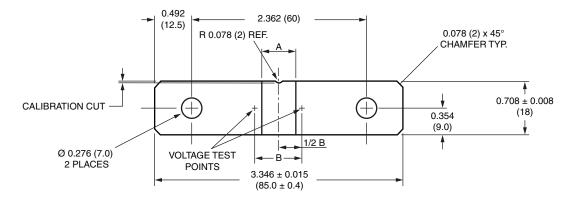
TECHNICAL SPECIFICATIONS						
PARAMETER	UNIT	RESISTOR CHARACTERISTICS				
		\pm 200 for 50 $\mu\Omega$				
Temperature coefficient	ppm/°C	\pm 175 for 100 μ Ω / 125 μ Ω				
		\pm 110 for 250 μ Ω				
Temperature coefficient (element material)	ppm/°C	± 20				
Operating temperature range	°C	-65 to +170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



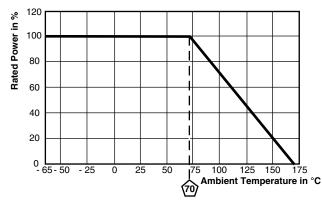


DIMENSIONS in inches (millimeters)





DERATING



UNLESS OTHERWISE LISTED

RESISTANCE VALUE (μΩ)	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	± 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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