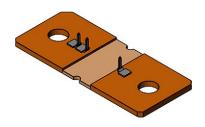


www.vishay.com

Vishay Dale

Power Metal Strip[®] Battery Shunt Resistor With Three Sense Pins Very Low Value (25 $\mu\Omega$, 50 $\mu\Omega$, 100 $\mu\Omega$, and 125 $\mu\Omega$)



LINKS TO ADDITIONAL RESOURCES





FEATURES

- High power to resistor size ratio
- Proprietary processing technique produce 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 (< 3 μV/°C)
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

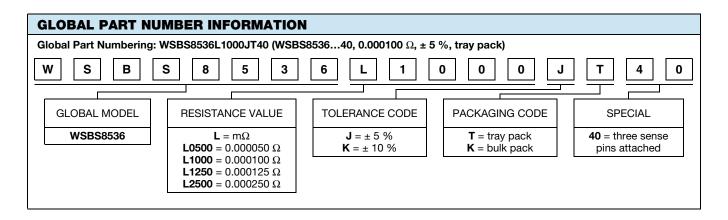
s	Pb-free
•	RoHS COMPLIANT
е	HALOGEN FREE
	<u>GREEN</u>
	(5-2008)

STANDARD ELECTRICAL SPECIFICATIONS							
GLOBAL MODEL	SIZE	POWER RATING P _{70 °C} W	TOLERANCE ± %	$\begin{array}{c} \textbf{RESISTANCE VALUE} \\ \textbf{RANGE} \\ \Omega \end{array}$	RESISTANCE VALUES CURRENTLY AVAILABLE (1) Ω	WEIGHT (typical) g	
WSBS853640	8536	50	5, 10	25µ to 125µ	25μ, 50μ, 100μ, 125μ	$25\mu = 77.7,$ $50\mu = 75.7,$ $100\mu / 125\mu = 71.7$	

Note

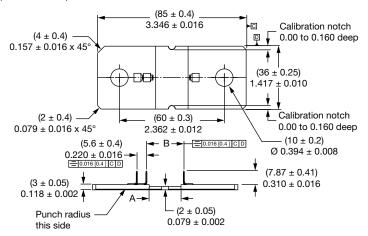
⁽¹⁾ Other values may be available, contact factory

TECHNICAL SPECIFICATIONS					
PARAMETER	UNIT	RESISTOR CHARACTERISTICS			
		± 200 for 25 μΩ			
Temperature coefficient	ppm/°C	± 175 for 50 μΩ			
		\pm 165 for 100 μ Ω / 125 μ Ω			
Temperature coefficient (element material)	ppm/°C	± 20			
Operating temperature range	°C	-65 to +170			
Maximum current rating	Α	(P/R) ^{1/2}			





DIMENSIONS in inches (millimeters)

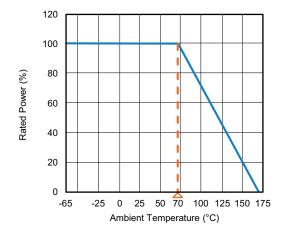


RESISTANCE VALUE (μΩ)	ELEMENT MATERIAL	A REFERENCE	B ± 0.005 (± 0.13)
25	Mn-Cu	0.145 (3.683)	0.135 (3.429)
50	Mn-Cu	0.360 (9.144)	0.492 (12.496)
100	Mn-Cu	0.730 (18.542)	0.862 (21.894)
125	Mn-Cu	0.900 (22.860)	1.032 (26.212)

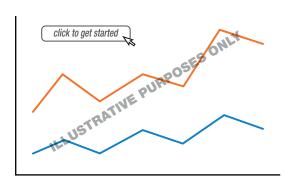
TOLERANCES ON DECIMALS
.xxx ± 0.005 (.x ± 0.1)

UNLESS OTHERWISE LISTED

DERATING



PULSE CAPABILITY



 $\underline{www.vishay.com/resistors/large-shunt-power-metal-strip-calculator/}$

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 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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