



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

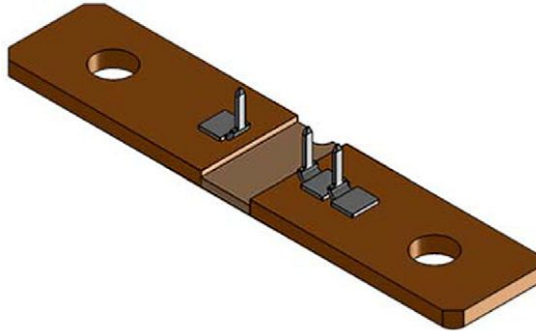
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## Power Metal Strip® Shunt Resistor With Three Sense Pins, Very Low Value (50 μΩ, 100 μΩ, and 125 μΩ)



### FEATURES

- High power to resistor size ratio
- Sense pins allow for consistent contact location
- Proprietary processing technique produces extremely low resistance values
- Welded terminal to element 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 available)
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

**DESIGN TOOLS** (click logo to get started)



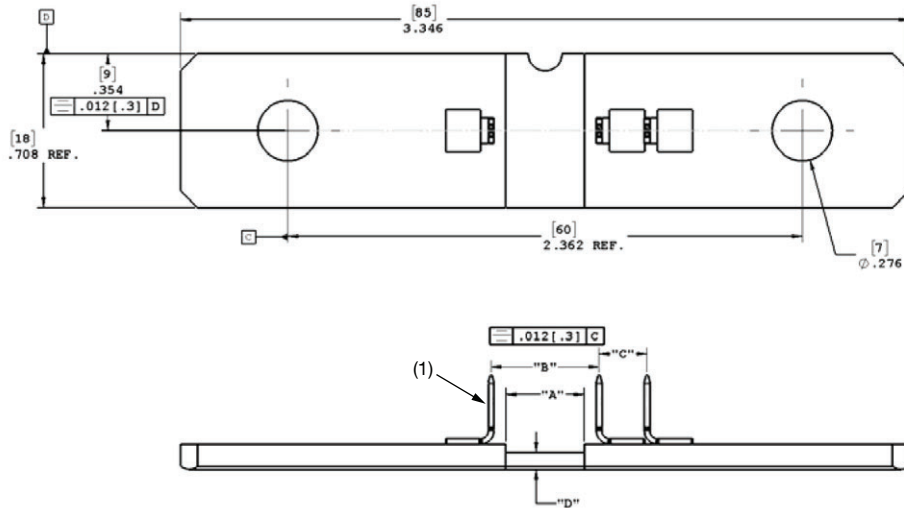
STANDARD ELECTRICAL SPECIFICATIONS						
GLOBAL MODEL	SIZE	POWER RATING $P_{70^\circ\text{C}}$ W	TOLERANCE $\pm \%$	RESISTANCE VALUE RANGE $\Omega$	RESISTANCE VALUES CURRENTLY AVAILABLE <sup>(1)</sup> $\Omega$	WEIGHT (typical) g
WSBS8518...40	8518	36	5, 10	50μ to 1000μ	50μ, 100μ, 125μ	50μ = 38.6, 100μ / 125μ = 37.1

**Note**

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

TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Temperature coefficient	ppm/°C	$\pm 200$ for 50 μΩ $\pm 175$ for 100 μΩ / 125 μΩ
Temperature coefficient (element material)	ppm/°C	$\pm 20$
Thermal EMF	μV/°C	< 1 for 50 μΩ and < 3 for 100 μΩ, 125 μΩ
Inductance	nH	< 5
Operating temperature range	°C	-65 to +170
Maximum current rating	A	$(P/R)^{1/2}$

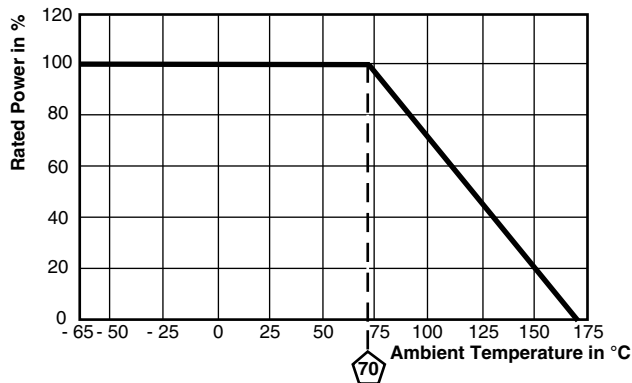
GLOBAL PART NUMBER INFORMATION																
GLOBAL PART NUMBERING: WSBS8518L1000JT40 (WSBS8518...40, 0.000100 Ω, $\pm 5 \%$ , tray pack)																
W	S	B	S	8	5	1	8	L	1	0	0	0	J	T	4	0
GLOBAL MODEL		RESISTANCE VALUE			TOLERANCE CODE			PACKAGING CODE			SPECIAL					
WSBS8518		L = mΩ L0500 = 0.000050 Ω L1000 = 0.000100 Ω L1250 = 0.000125 Ω			J = $\pm 5 \%$ K = $\pm 10 \%$			K = bulk pack T = tray pack			40 = three sense pins attached					

**DIMENSIONS** in inches (millimeters)


RESISTANCE VALUE ( $\mu\Omega$ )	ELEMENT MATERIAL	A REFERENCE	B $\pm 0.005$ [ $\pm 0.13$ ]	C $\pm 0.005$ [ $\pm 0.13$ ]	D $\pm 0.002$ [ $\pm 0.05$ ]
50	Mn-Cu	0.145 [3.68]	0.135 [3.43]	0.220 [5.59]	0.079 [2.00]
100	Mn-Cu	0.370 [9.40]	0.495 [12.57]	0.220 [5.59]	0.079 [2.00]
125	Mn-Cu	0.480 [12.19]	0.585 [14.86]	0.220 [5.59]	0.079 [2.00]

**Note**

(1) Minimum pull strength of 200 N

**DERATING**


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

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	5x 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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