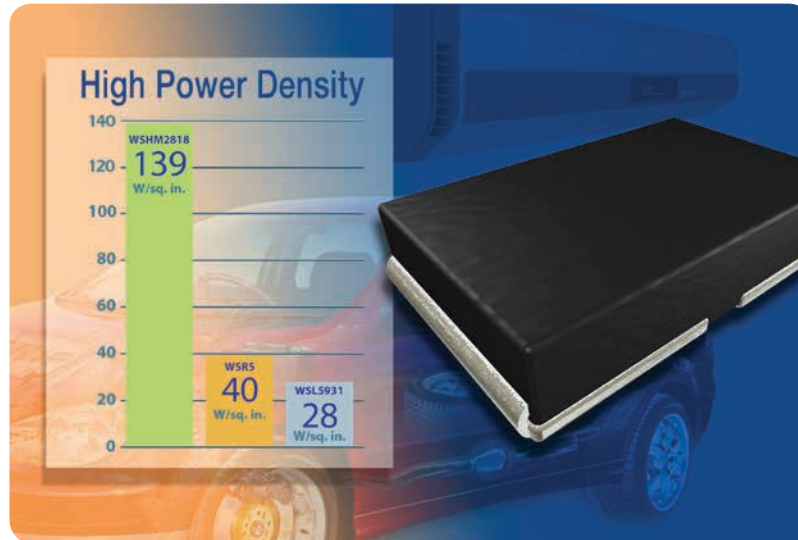




# POWER METAL STRIP® RESISTORS

WSHM2818

## Power Metal Strip® Resistors, High Power (7 W), Low Value (Down to 0.001 Ω), Surface Mount



### KEY BENEFITS

- Improved thermal management incorporated into design
- The WSHM2818 resistor has 7 W power capability in a small 2818 size package
- Very low inductance (< 5 nH)
- Very low resistance values (1 mΩ to 100 mΩ)

### APPLICATIONS

#### Automotive:

- Electronic controls (engine controls, climate controls, anti-lock brakes, etc.)
- Brushless DC motor controls (electronic power steering, electric: water pump, oil pump, air conditioning, etc.)
- Electric and hybrid controls (battery management)

#### Industrial:

- Oil / gas well drilling (down hole test / measurement equipment)
- Air conditioning / heat pump (inverter control)

#### Consumer:

- Air conditioning / heat pump (inverter control)
- White goods (inverter control)

#### Computer:

- DC/DC converter, VRMs for servers
- Power management / safety

### RESOURCES

- Datasheet: WSHM2818 - [www.vishay.com/doc?30188](http://www.vishay.com/doc?30188)
- For technical questions contact [ww2bresistors@vishay.com](mailto:ww2bresistors@vishay.com)
- Material categorization: For definitions please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)





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STANDARD ELECTRICAL SPECIFICATIONS					
GLOBAL MODEL	SIZE	POWER RATING $P_{70^\circ\text{C}}$ W	TOLERANCE ± %	RESISTANCE VALUE RANGE Ω	WEIGHT (typical) g/1000 pieces
WSHM2818	2818	7 <sup>(2)</sup>	1.0	0.001 to 0.1	167.8

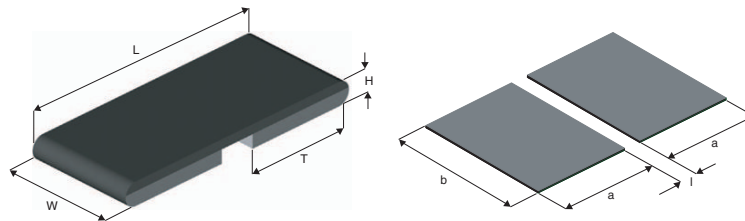
**Note**

<sup>(2)</sup> The WSHM2818 is rated at 7 W with maximum surface temperature of 180 °C.

TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Temperature coefficient	ppm/°C	± 200 for 1 mΩ to 5.99 mΩ ± 75 for 6 mΩ to 100 mΩ
Inductance	nH	< 5
Operating temperature range	°C	-65 to +170
Maximum continuous current	A	$(P/R)^{1/2}$

GLOBAL PART NUMBER INFORMATION																	
Global Part Numbering: WSHM2818R1000FEA																	
W	S	H	M	2	8	1	8	R	1	0	0	0	F	E	A		
GLOBAL MODEL		RESISTANCE VALUE			TOLERANCE CODE			PACKAGING CODE			SPECIAL						
WSHM2818		L = mΩ* R = Decimal 4L000 = 0.004 Ω R0100 = 0.01 Ω  * Use "L" for resistance values < 0.01 Ω			F = ± 1.0 % J = ± 5.0 %			EA = Lead (Pb)-free, tape/reel EK = Lead (Pb)-free, bulk			(Dash number) (up to 2 digits) From 1 to 99 as applicable						

**DIMENSIONS** in inches (millimeters)



Revision 28-Apr-14

MODEL	RESISTANCE RANGE Ω	DIMENSIONS				SOLDER PAD DIMENSIONS		
		L	W	H	T	a	b	l
WSHM2818	0.001 to 0.1	0.280 ± 0.010 (7.1 ± 0.25)	0.180 ± 0.010 (4.6 ± 0.25)	0.059 ± 0.010 (1.50 ± 0.25)	0.125 ± 0.010 (3.18 ± 0.25)	0.138 (3.5)	0.200 (5.1)	0.024 (0.61)