

# Power Metal Strip® Battery Shunt Resistor W/Molded Enclosure Very Low Value (100 $\mu\Omega$ )



## FEATURES

- High power to resistor size ratio
- Proprietary processing technique produces extremely low resistance values
- All welded construction
- Solid metal manganese-copper alloy resistive element with low TCR (< 20 ppm/°C)
- Molded enclosure allows for easy PCB connection
- Includes 4-pin female connector (Molex # MX150334820401)
- Very low inductance (< 5 nH)
- Low thermal EMF (< 3  $\mu$ V/°C)
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



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

## STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	SIZE	POWER RATING $P_{70^\circ\text{C}}$ W	TOLERANCE %	RESISTANCE VALUE RANGE $\Omega$	RESISTANCE VALUES CURRENTLY AVAILABLE <sup>(1)</sup> $\Omega$	WEIGHT (typical) g
WSBM8518	8518	36	5.0	0.0001	100 $\mu$	60

### Note

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

## TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/°C	$\pm 225$
Temperature Coefficient (Element material)	ppm/°C	$\pm 20$
Operating Temperature Range	°C	- 65 to + 170
Thermal EMF	$\mu$ V/°C	< 3
Inductance	nH	< 5
Maximum Current Rating	A	$(P/R)^{1/2}$

## GLOBAL PART NUMBER INFORMATION

GLOBAL PART NUMBERING: WSBM8518L1000JK (WSBM8518, 0.000100  $\Omega$ ,  $\pm 5\%$ )

W S B M 8 5 1 8 L 1 0 0 0 J K

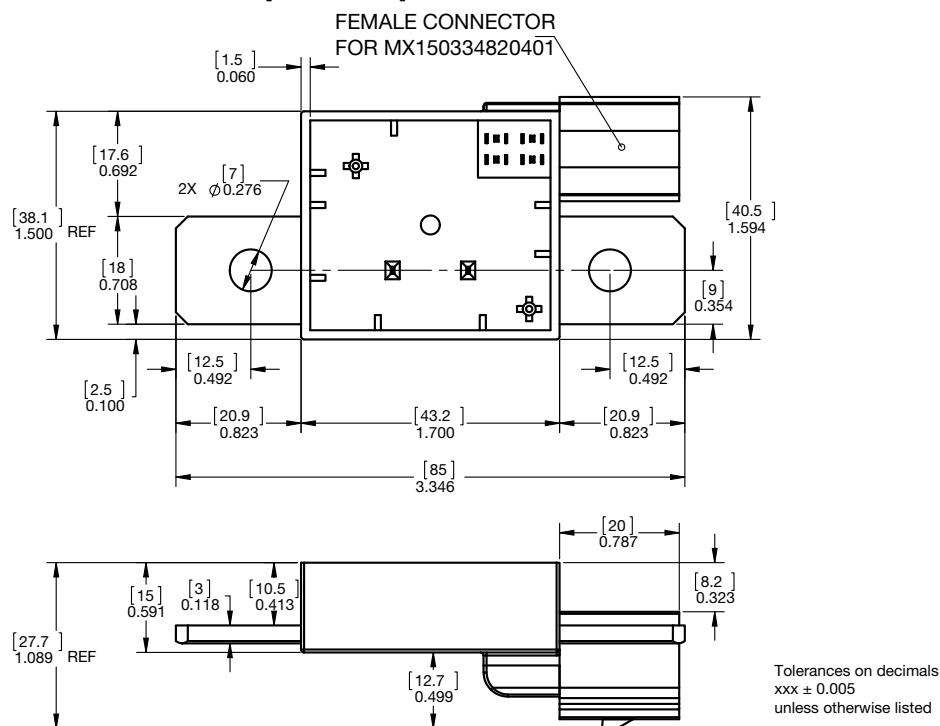
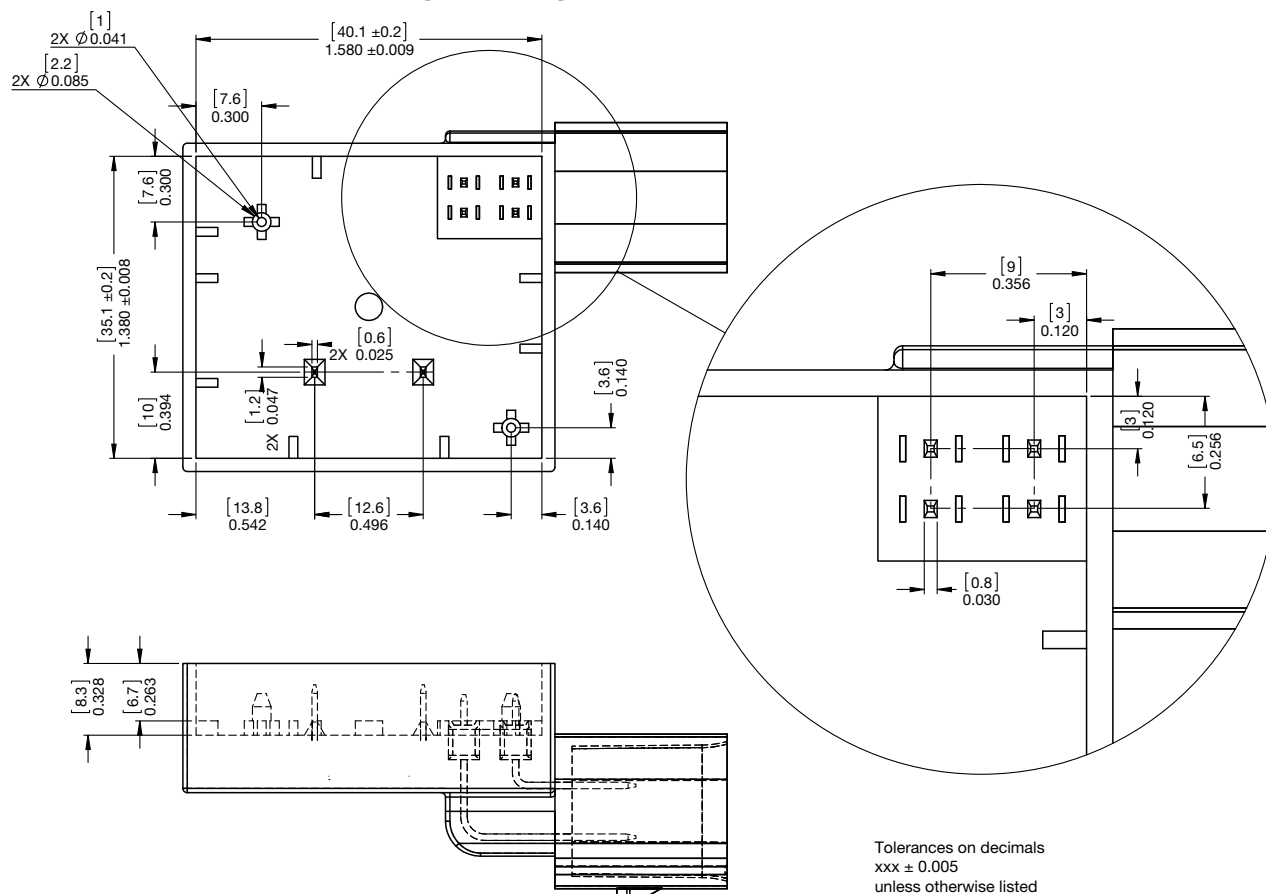
GLOBAL MODEL  
(8 digits)  
**WSBM8518**

RESISTANCE VALUE  
(5 digits)  
L = m $\Omega$   
L1000 = 0.000100  $\Omega$

TOLERANCE CODE  
(1 digit)  
J =  $\pm 5.0\%$

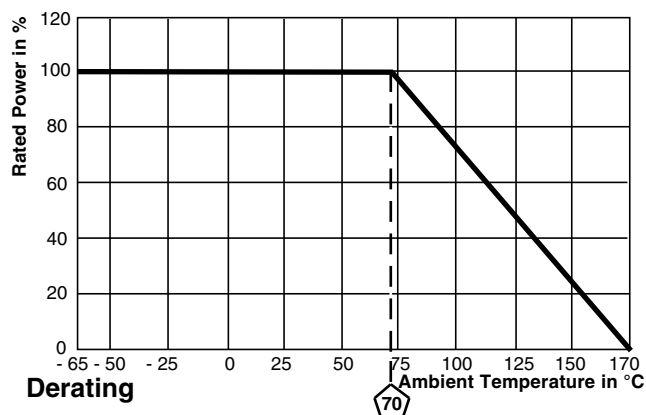
PACKAGING CODE  
(1 digit)  
K = Bulk pack

SPECIAL  
(up to 2 digits)  
(Dash number)  
From 1 to 99 as  
applicable

**EXTERNAL DIMENSIONS** in inches [millimeters]

**INTERNAL DIMENSIONS** in inches [millimeters]




## DERATING



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



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