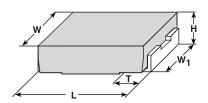
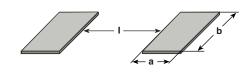


TECHNICAL SPECIFICATIONS				
PARAMETER	UNIT	WSR2 AND WSR3 RESISTOR CHARACTERISTICS		
Temperature coefficient TCR measured from -55 °C to 150 °C	ppm/°C	$\pm$ 75 for 0.010 $\Omega$ to 1.0 $\Omega$		
		$\pm$ 110 for 0.005 $\Omega$ to 0.0099 $\Omega$		
		$\pm$ 300 for 0.004 $\Omega$ to 0.0049 $\Omega$		
		$\pm$ 450 for 0.003 $\Omega$ to 0.0039 $\Omega$		
		$\pm$ 600 for 0.002 $\Omega$ to 0.0029 $\Omega$		
		$\pm$ 750 for 0.001 $\Omega$ to 0.0019 $\Omega$		
Element TCR	ppm/°C	< 20		
Dielectric withstanding voltage	nge V <sub>AC</sub> > 500			
Insulation resistance	Ω	> 10 <sup>9</sup>		
Operating temperature range	°C	-65 to +275		
Maximum working voltage	V	(P x R) <sup>1/2</sup>		

## **DIMENSIONS** in inches (millimeters)





#### Notes

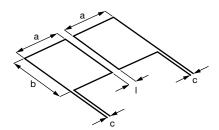
- 3D models available: www.vishay.com/doc?30336
- Surface mount solder profile recommendations: www.vishay.com/doc?31052

MODEL	DIMENSIONS				SOLDER PAD DIMENSIONS			
MODEL	L	н	Т	w	W <sub>1</sub>	а	b	I
WSR2, WSR3	0.455 ± 0.032 (11.56 ± 0.813)	0.095 ± 0.005 (2.41 ± 0.127)		0.275 ± 0.005 (6.98 ± 0.127)		0.155 (3.94)	0.230 (5.84)	0.205 (5.21)

#### Note

 Sensing locations are based on the construction of the part; terminals are wrapped from the outside to underneath. These options place the sensing location nearest the temperature stable resistance element, which minimizes contact resistance and optimizes TCR

## **TYPICAL SENSING LAYOUT**



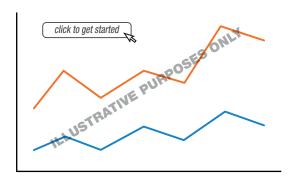
а	b	С	l
0.155	0.230	0.020	0.205
(3.94)	(5.84)	(0.51)	(5.21)



### **DERATING**

#### Rated Power in % 120 100 80 60 40 20 0 l - 65 - 25 25 75 125 175 225 275 Ambient Temperature °C (70)

### **PULSE CAPABILITY**



www.vishay.com/resistors/power-metal-strip-calculator

PERFORMANCE				
TEST	CONDITIONS OF TEST	TEST LIMITS		
	CONDITIONS OF TEST	WSR2	WSR3	
Thermal shock	-55 °C to +150 °C, 1000 cycles, 15 min at each extreme	± 0.5 % + 0.0005 Ω	± 0.5 % + 0.0005 Ω	
Short time overload	WSR2: 5x rated power for 5 s WSR3: 4x rated power for 5 s	± 0.5 % + 0.0005 Ω	± 2.0 % + 0.0005 Ω	
Low temperature storage	-65 °C for 24 h	± 0.5 % + 0.0005 Ω	± 0.5 % + 0.0005 Ω	
High temperature exposure	1000 h at +275 °C	± 1.0 % + 0.0005 Ω	± 1.0 % + 0.0005 Ω	
Bias humidity	+85 °C, 85 % RH, 10 % bias, 1000 h	$\pm$ 0.5 % + 0.0005 $\Omega$	± 0.5 % + 0.0005 Ω	
Mechanical shock	100 g's for 6 ms, 5 pulses	± 0.5 % + 0.0005 Ω	± 0.5 % + 0.0005 Ω	
Vibration	Frequency varied 10 Hz to 2000 Hz in 1 min, 3 directions, 12 h	± 0.5 % + 0.0005 Ω	± 0.5 % + 0.0005 Ω	
Load life	1000 h at rated power, +70 °C, 1.5 h "ON", 0.5 h "OFF"	± 1.0 % + 0.0005 Ω	± 2.0 % + 0.0005 Ω	
Resistance to solder heat	+260 °C solder, 10 s to 12 s dwell, 25 mm/s emergence	± 0.5 % + 0.0005 Ω	± 0.5 % + 0.0005 Ω	
Moisture resistance	MIL-STD-202, method 106, 0 % power, 7a and 7b not required	± 0.5 % + 0.0005 Ω	± 0.5 % + 0.0005 Ω	

PACKAGING (1)					
MODEL	REEL				
	TAPE WIDTH	DIAMETER	PIECES/REEL	CODE	
WSR2 and WSR3	24 mm/embossed plastic	330 mm/13"	1500	EA	

#### **Notes**

- Embossed Carrier Tape per EIA-481
- (1) Additional packaging details at www.vishay.com/doc?20051



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# Vishay:

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WSR2R7680FBA WSR2R0698FBA WSR2R0806FBA WSR2R1200FTA WSR2R1500FTA WSR2R9100FBA
WSR2R9400FBA WSR2R3300FBA WSR2R5600FBA WSR2R5200FBA WSR2R7500FBA WSR2R0200FBA
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WSR2R0500FEB WSR2R7500FEB WSR2R1500FEB WSR2R1820FEB WSR2R0250FEK WSR31L000JEA
WSR2R0330FEA WSR27L500FEK WSR2R0500DEA WSR23L000FEA WSR26L000FEA WSR2R0250FEA
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