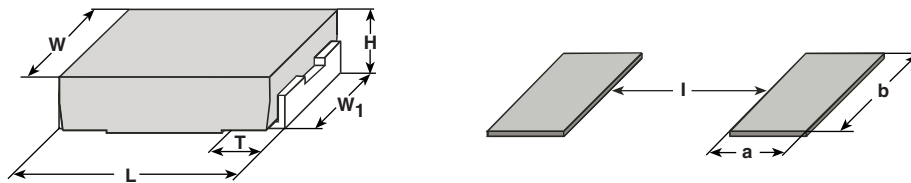


TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	WSR2 AND WSR3 RESISTOR CHARACTERISTICS
Temperature coefficient TCR measured from -55 °C to 150 °C	ppm/°C	± 75 for 0.010 Ω to 1.0 Ω
		± 110 for 0.005 Ω to 0.0099 Ω
		± 300 for 0.004 Ω to 0.0049 Ω
		± 450 for 0.003 Ω to 0.0039 Ω
		± 600 for 0.002 Ω to 0.0029 Ω
Element TCR	ppm/°C	< 20
Dielectric withstanding voltage	V _{AC}	> 500
Insulation resistance	Ω	> 10 ⁹
Operating temperature range	°C	-65 to +275
Maximum working voltage	V	(P × R) ^{1/2}

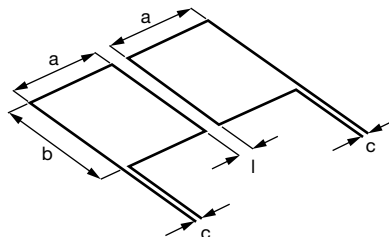
DIMENSIONS in inches (millimeters)

Notes

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

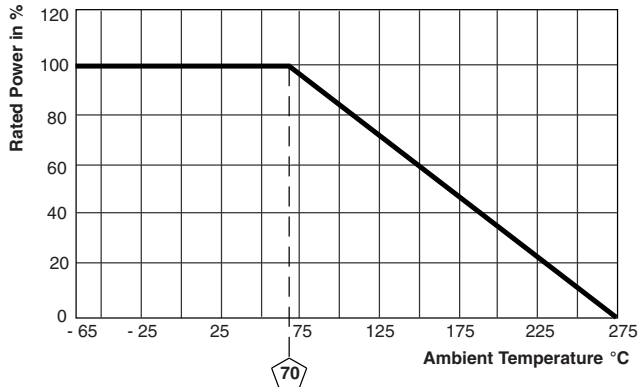
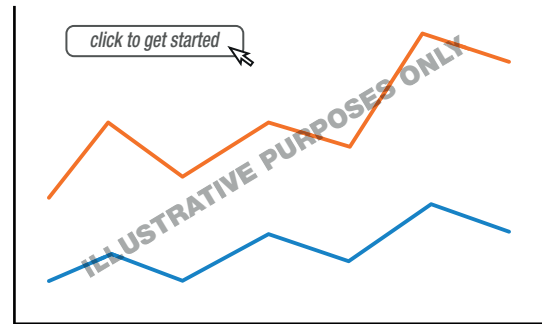
MODEL	DIMENSIONS					SOLDER PAD DIMENSIONS		
	L	H	T	W	W ₁	a	b	l
WSR2, WSR3	0.455 ± 0.032 (11.56 ± 0.813)	0.095 ± 0.005 (2.41 ± 0.127)	0.100 ± 0.010 (2.54 ± 0.254)	0.275 ± 0.005 (6.98 ± 0.127)	0.215 ± 0.005 (5.46 ± 0.127)	0.155 (3.94)	0.230 (5.84)	0.205 (5.21)

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


a	b	c	l
0.155 (3.94)	0.230 (5.84)	0.020 (0.51)	0.205 (5.21)

DERATING

PULSE CAPABILITY

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

PERFORMANCE			
TEST	CONDITIONS OF TEST	TEST LIMITS	
		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	± 0.5 % + 0.0005 Ω	± 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



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Vishay:

[WSR31L350JTA](#) [WSR2R3900FTB](#) [WSR2R0700FTB](#) [WSR21L000JTB](#) [WSR35L000FTB](#) [WSR32L200JBA](#)
[WSR31L500JBA](#) [WSR2R5200FEB](#) [WSR2R0400FEB](#) [WSR2R0250FEB](#) [WSR2R3900FEB](#) [WSR2R0125FEB](#)
[WSR2R3650FEB](#) [WSR2R0700FEB](#) [WSR35L000FEB](#) [WSR21L000JEB](#) [WSR27L000FEB](#) [WSR25L000FEB](#)
[WSR28L000FEB](#) [WSR2R3000FEB](#) [WSR2R3300FEB](#) [WSR36L000FEB](#) [WSR3R0120FEB](#) [WSR3R0300FEB](#)
[WSR3R0330FEB](#) [WSR23L000FEB](#) [WSR24L000FEB](#) [WSR26L000FEB](#) [WSR2R0800FEB](#) [WSR2R0900FEB](#)
[WSR33L000FEB](#) [WSR34L000FEB](#) [WSR37L000FEB](#) [WSR38L000FEB](#) [WSR39L000FEB](#) [WSR3R0400FEB](#)
[WSR3R0700FEB](#) [WSR3R0900FEB](#) [WSR31L000JBA](#) [WSR22L200JTA](#) [WSR2R0330FTB](#) [WSR2R1460FBA](#)
[WSR3R0300FTB](#) [WSR3R0500FTB](#) [WSR2R4300DTA](#) [WSR3R1500FTA](#) [WSR-2 .1 1%R86](#) [WSR-2 .15 1%R86](#)
[WSR-2 .2 .5%R86](#) [WSR2R0300FEB](#) [WSR2R1800FEB](#) [WSR2R5000FEB](#) [WSR-3 .01 1%](#) [WSR-3 .02 1%](#) [WSR-3 .1](#)
[1%TR](#) [WSR3R0600FTA](#) [WSR2R0500FTB](#) [WSR2R0300FTB](#) [WSR2R3000FTB](#) [WSR2R3300FTB](#) [WSR2R5000FTB](#)
[WSR36L000FTB](#) [WSR35L000FT](#) [WSR3R0125FEA](#)