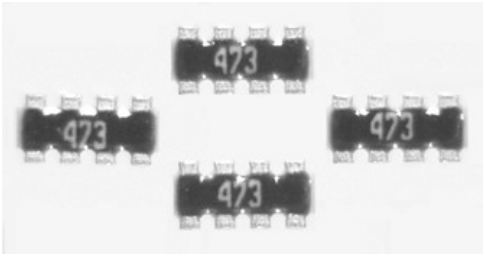
Features:

- Thick film resistor element
- Multiple circuit types available
- High palladium inner terminations
- Square corner construction standard
- Zero-ohm jumper available
- 100% RoHS compliant and lead free without exemption
- Halogen free
- REACH compliant



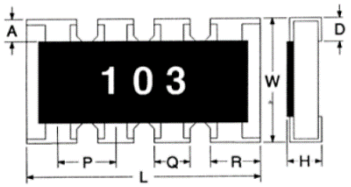
Electrical Specifications

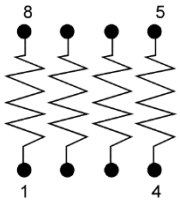
Type / Code	Power Rating (W) @ 70ºC	Maximum Working Voltage[1] (V)	Maximum Overload Voltage (V)	TCR (ppm/ºC)	Ohmic Range (Ω) and Tolerance		
					1%	2%	5%
RAVS102D	0.063	25	50	± 300	-	1 - 10	
				± 200	10 - 1M		
RAVS162D	0.063	50	100	± 200	10 - 1M	1 - 10M	
RAVS104D	0.063	25	50	± 200	-		10 - 1M
RAVS164D	0.063	50	100	± 200	-		22 - 1M
RAVS324D	0.125	200	400	± 200	22 - 1M	10 - 1M	

(1) Lesser of $\sqrt{P*R}$ or maximum working voltage

Mechanical Specifications

Schematic:





Type / Code	Body Length	Body Width	Body Height	Element Spacing	Termination Width	End Termination Width	Top Termination	Bottom Termination	Unit
	L	W	H	P	Q	R	A	D	
RAVS102D	0.039 ± 0.004 1.00 ± 0.10	0.039 ± 0.004 1.00 ± 0.10	0.014 ± 0.004 0.35 ± 0.10	0.026 ± 0.002 0.65 ± 0.05	-	0.013 ± 0.002 0.33 ± 0.05	0.006 ± 0.004 0.15 ± 0.10	0.010 ± 0.002 0.25 ± 0.05	inches mm
RAVS162D	0.063 ± 0.006 1.60 ± 0.15	0.063 ± 0.006 1.60 ± 0.15	0.020 ± 0.006 0.50 ± 0.15	0.031 ± 0.002 0.80 ± 0.05	-	0.024 ± 0.006 0.60 ± 0.15	0.012 ± 0.006 0.30 ± 0.15	0.012 ± 0.006 0.30 ± 0.15	inches mm
RAVS104D	0.079 ± 0.004 2.00 ± 0.10	0.039 ± 0.004 1.00 ± 0.10	0.014 ± 0.002 0.35 ± 0.05	0.020 ± 0.004 0.50 ± 0.10	0.012 ± 0.006 0.30 ± 0.15	0.016 ± 0.006 0.40 ± 0.15	0.006 ± 0.004 0.15 ± 0.10	0.010 ± 0.004 0.25 ± 0.10	inches mm
RAVS164D	0.126 ± 0.004 3.20 ± 0.10	0.063 ± 0.004 1.60 ± 0.10	0.020 ± 0.004 0.50 ± 0.10	0.031 ± 0.004 0.80 ± 0.10	0.016 ± 0.006 0.40 ± 0.15	0.024 ± 0.006 0.60 ± 0.15	0.012 ± 0.008 0.30 ± 0.20	0.010 ± 0.006 0.25 ± 0.15	inches mm
RAVS324D	0.200 ± 0.008 5.08 ± 0.20	0.122 ± 0.008 3.10 ± 0.20	0.022 ± 0.004 0.55 ± 0.10	0.050 ± 0.004 1.27 ± 0.10	0.031 ± 0.008 0.80 ± 0.20	- -	0.020 ± 0.008 0.50 ± 0.20	0.012 ± 0.008 0.30 ± 0.20	inches mm

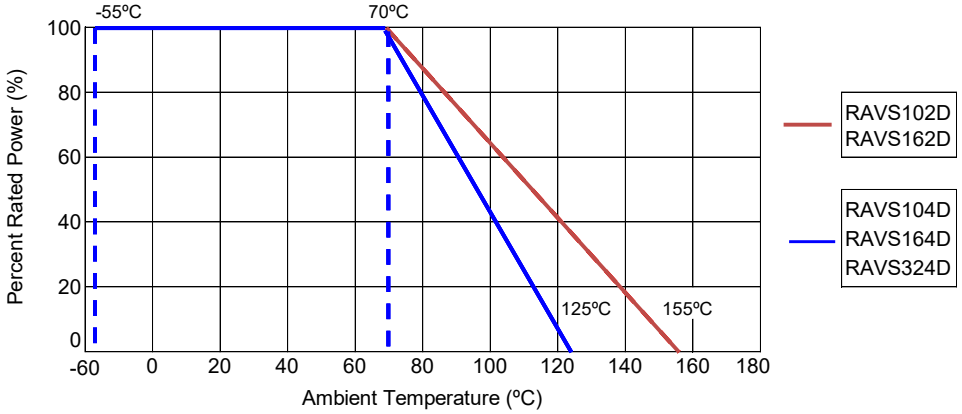
Performance Characteristics

Test	Test Results (JIS C 5202)
Load Life in Moisture	±3%
Temperature Cycle	±1%
Load Life	±3%
Resistance to Soldering Heat	±1%
Terminal Adhesion	±1%
Short Time Overload	±2%
Anti-sulfur (ASTM B 809-95) 60ºC, >90% R.H.	±1%

Operating Temperature Range: -55ºC to +155ºC (RAVS102D, RAVS162D)
-55ºC to +125ºC (RAVS104D, RAVS164D, RAVS324D)

This specification may be changed at any time without prior notice.
Please confirm technical specifications before you order and/or use.

Power Derating Curve:



Recommended Solder Profile

This information is intended as a reference for solder profiles for Stackpole resistive components. These profiles should be compatible with most soldering processes. These are only recommendations. Actual numbers will depend on board density, geometry, packages used, etc., especially those cells labeled with "*".

100% Matte Tin / RoHS Compliant Terminations

Soldering iron recommended temperatures: 330°C to 350°C with minimum duration.
Maximum number of reflow cycles: 3.

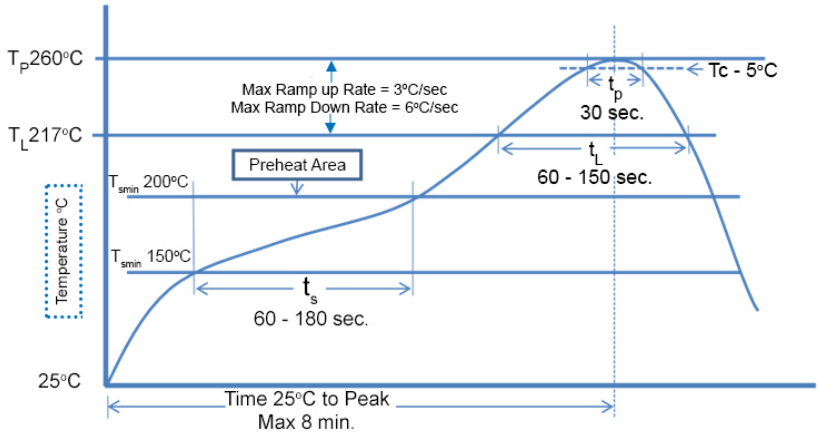
Wave Soldering			
Description	Maximum	Recommended	Minimum
Preheat Time	80 seconds	70 seconds	60 seconds
Temperature Diff.	140°C	120°C	100°C
Solder Temp.	260°C	250°C	240°C
Dwell Time at Max.	10 seconds	5 seconds	*
Ramp DN (°C/sec)	N/A	N/A	N/A

Temperature Diff. = Defference between final preheat stage and soldering stage.

Convection IR Reflow			
Description	Maximum	Recommended	Minimum
Ramp Up (°C/sec)	3°C/sec	2°C/sec	*
Dwell Time > 217°C	150 seconds	90 seconds	60 seconds
Solder Temp.	260°C	245°C	*
Dwell Time at Max.	30 seconds	15 seconds	10 seconds
Ramp DN (°C/sec)	6°C/sec	3°C/sec	*

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Recommended Lead Free Resistor Reflow Profile



RoHS Compliance

Stackpole Electronics has joined the worldwide effort to reduce the amount of lead in electronic components and to meet the various regulatory requirements now prevalent, such as the European Union's directive regarding "Restrictions on Hazardous Substances" (RoHS 3). As part of this ongoing program, we periodically update this document with the status regarding the availability of our compliant components. All our standard part numbers are compliant to EU Directive 2011/65/EU of the European Parliament as amended by Directive (EU) 2015/863/EU as regards the list of restricted substances.

RoHS Compliance Status

Standard Product Series	Description	Package / Termination Type	Standard Series RoHS Compliant	Lead-Free Termination Composition	Lead-Free Mfg. Effective Date (Std Product Series)	Lead-Free Effective Date Code (YY/WW)
RAVS	Convex Anti-Sulfur Chip Resistor Array	SMD	YES(1)	100% Matte Sn over Ni	Always	Always

Note (1): RoHS Compliant by means of exemption 7c-I.

"Conflict Metals" Commitment

We at Stackpole Electronics, Inc. are joined with our industry in opposing the use of metals mined in the "conflict region" of the eastern Democratic Republic of the Congo (DRC) in our products. Recognizing that the supply chain for metals used in the electronics industry is very complex, we work closely with our own suppliers to verify to the extent possible that the materials and products we supply do not contain metals sourced from this conflict region. As such, we are in compliance with the requirements of Dodd-Frank Act regarding Conflict Minerals.

Compliance to "REACH"

We certify that all passive components supplied by Stackpole Electronics, Inc. are SVHC (Substances of Very High Concern) free and compliant with the requirements of EU Directive 1907/2006/EC, "The Registration, Evaluation, Authorization and Restriction of Chemicals", otherwise referred to as REACH. Contact us for complete list of REACH Substance Candidate List.

This specification may be changed at any time without prior notice.
Please confirm technical specifications before you order and/or use.

Environmental Policy

It is the policy of Stackpole Electronics, Inc. (SEI) to protect the environment in all localities in which we operate. We continually strive to improve our effect on the environment. We observe all applicable laws and regulations regarding the protection of our environment and all requests related to the environment to which we have agreed. We are committed to the prevention of all forms of pollution.

How to Order

1	2	3	4	5	6	7	8	9	10	11	12	13	14
R	**A**	**V**	**S**	**3**	**2**	**4**	**D**	**J**	**T**	**1**	**0**	**K**	**0**

Product Series	
RAVS	Convex Anti-Sulfur

Power	
Code	W
10	0.06
16	0.06
32	0.13

Elements
2
4

Circuit Type	
Code	Description
D	Isolated

Tolerance	
Code	Tol
F	1%
G	2%
J	5%
Z	Jumper

Packaging			
Code	Description	Size	Quantity
T	Tape and Reel	10	10000
		16	5000
		32	4000

Resistance Value
Four characters with the multiplier used as the decimal holder.
22 ohm = 22R0 10.2 Kohm = 10K2 1 Mohm = 1M00 Zero ohm jumper = 0R00

This specification may be changed at any time without prior notice.
Please confirm technical specifications before you order and/or use.