

RACF Series (DISCONTINUED)

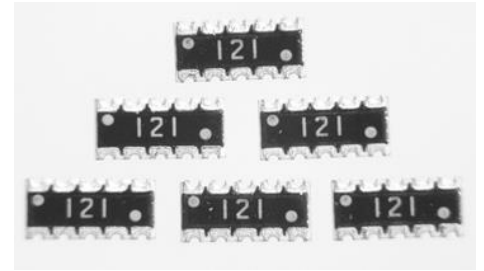
Concave Termination Chip Resistor Array

Stackpole Electronics, Inc.

Resistive Product Solutions

Features:

- Product will be discontinued - not recommended for new designs
- Last time buy December 1, 2020
- For more information please see our [PDN here](#)
- RAVF series of convex arrays is recommended as replacement
- RoHS compliant, REACH compliant, lead free, and halogen free
- AEC-Q200 compliant



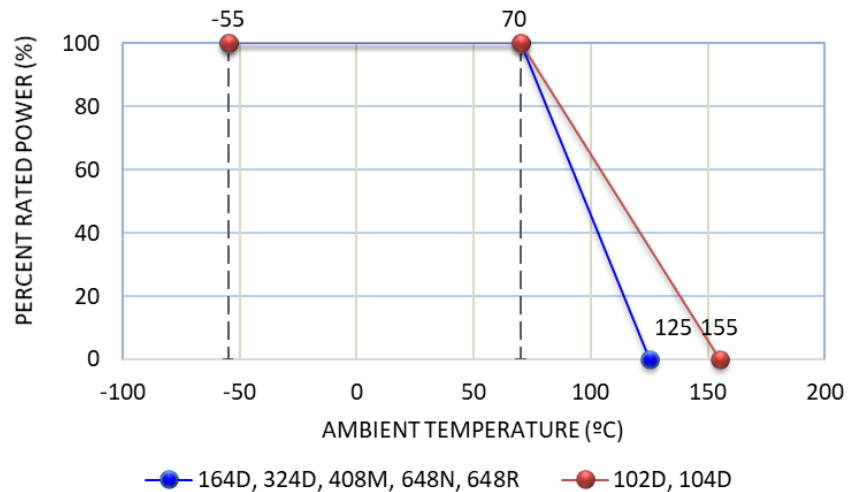
Electrical Specifications							
Type / Code / # of Elements / Circuit Type	Power Rating (W) (per element) @ 70°C	Maximum Working Voltage (V)	Maximum Overload Voltage (V)	TCR (ppm/°C)	Ohmic Range (Ω) and Tolerance		
					1%	2%	5%
RACF102D	0.063	25	50	± 650	3 - 9.88		
				± 250	10 - 1M		
RACF104D	0.063	25	50	± 400	1 - 9.88		
				± 200	10 - 1M		
RACF164D	0.063	50	100	± 200	22 - 1M	10 - 1M	
RACF324D	0.125	200	400	± 200	-		10 - 1M
RACF408M	0.063	25	50	± 200	-		22 - 1M
RACF648N	0.063	50	100	± 200	-		22 - 1M
RACF648R	0.063	50	100	± 200	-		22 - 1M

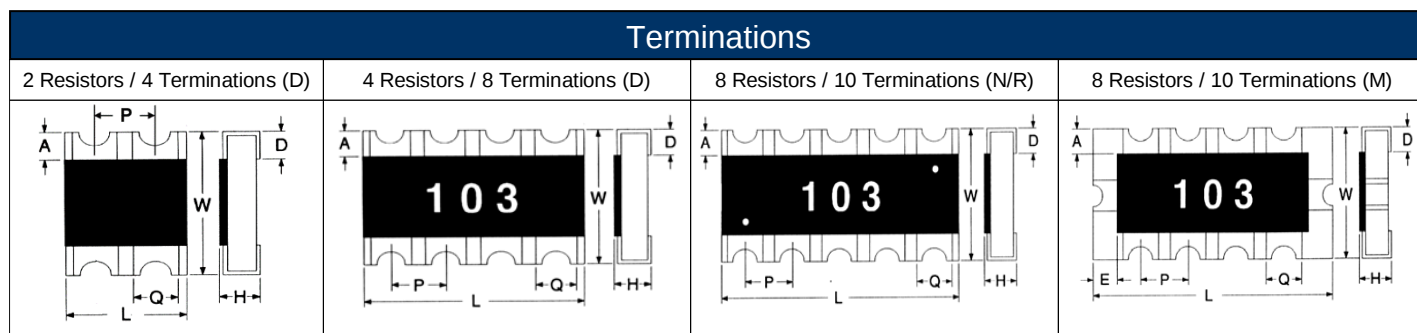
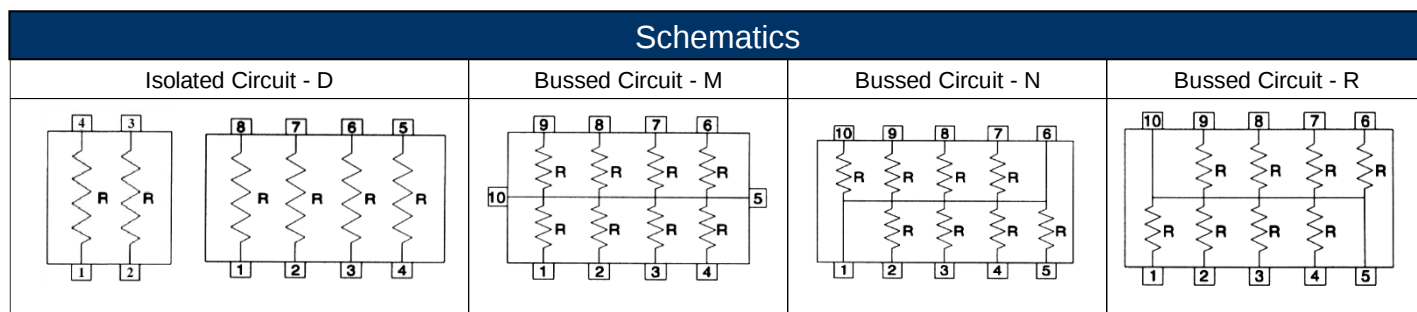
Note: (1) Lesser of $\sqrt{P \cdot R}$ or maximum working voltage.

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%

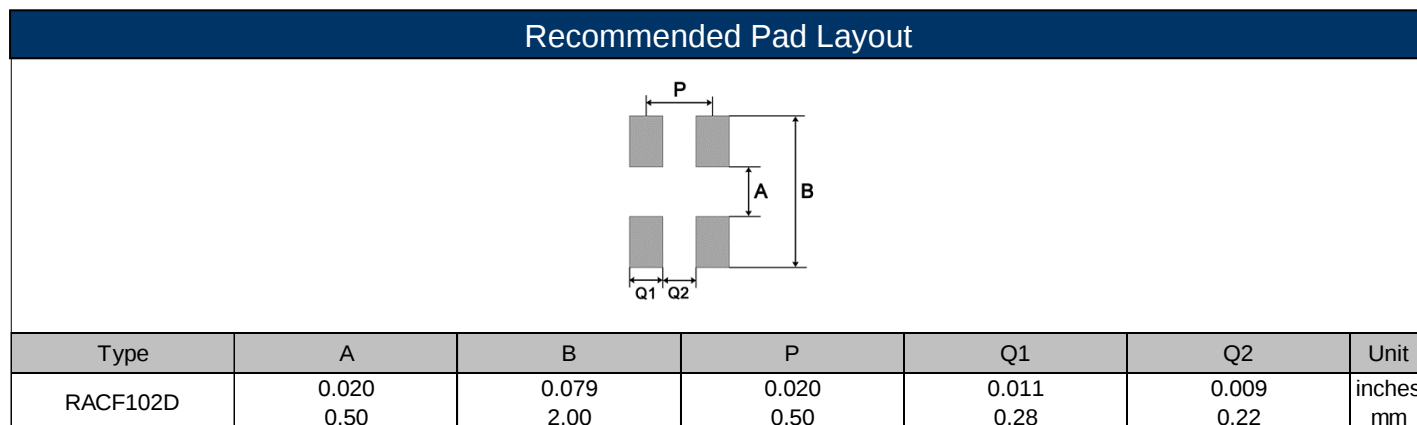
Operating Temperature Range: RACF102D and RACF104D: -55°C to 155°C
All other types: -55°C to 125°C

Power Derating Curve:

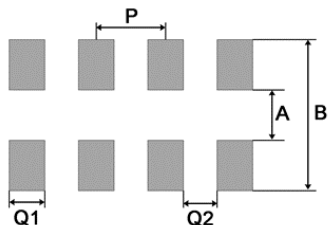




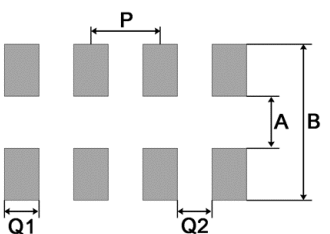
Mechanical Specifications									
Type / Code / # of Elements / Circuit Type	L Body Length	W Body Width	H Body Height	P Element Spacing	Q Termination Width	D Bottom Termination	A Top Termination	E End Termination	Unit
RACF102D	0.039 ± 0.004 1.00 ± 0.10	0.039 ± 0.004 1.00 ± 0.10	0.012 ± 0.004 0.30 ± 0.10	0.020 0.50	0.012 ± 0.004 0.30 ± 0.10	0.010 ± 0.004 0.25 ± 0.10	0.007 ± 0.004 0.18 ± 0.10	-	inches mm
RACF104D	0.079 ± 0.004 2.00 ± 0.10	0.039 ± 0.004 1.00 ± 0.10	0.016 ± 0.000 0.40 ± 0.10	0.020 0.50	0.012 ± 0.004 0.30 ± 0.10	0.010 ± 0.004 0.25 ± 0.10	0.006 ± 0.004 0.15 ± 0.10	-	inches mm
RACF164D	0.126 ± 0.008 3.20 ± 0.20	0.063 ± 0.006 1.60 ± 0.15	0.024 ± 0.006 0.60 ± 0.15	0.031 0.80	0.016 ± 0.008 0.40 ± 0.20	0.016 ± 0.008 0.40 ± 0.20	0.012 ± 0.008 0.30 ± 0.20	-	inches mm
RACF324D	0.200 ± 0.008 5.08 ± 0.20	0.118 ± 0.008 3.00 ± 0.20	0.024 ± 0.004 0.60 ± 0.10	0.050 1.27	0.031 ± 0.004 0.80 ± 0.10	0.020 ± 0.008 0.50 ± 0.20	0.022 ± 0.008 0.55 ± 0.20	-	inches mm
RACF408M	0.157 ± 0.008 4.00 ± 0.20	0.083 ± 0.008 2.10 ± 0.20	0.024 ± 0.004 0.60 ± 0.10	0.031 0.80	0.020 ± 0.008 0.50 ± 0.20	0.016 ± 0.008 0.40 ± 0.20	0.010 ± 0.008 0.25 ± 0.20	0.012 ± 0.008 0.30 ± 0.20	inches mm
RACF648N	0.252 ± 0.008 6.40 ± 0.20	0.122 ± 0.008 3.10 ± 0.20	0.024 ± 0.004 0.60 ± 0.10	0.050 1.27	0.028 ± 0.008 0.70 ± 0.20	0.020 ± 0.008 0.50 ± 0.20	0.014 ± 0.006 0.35 ± 0.15	-	inches mm
RACF648R	0.252 ± 0.008 6.40 ± 0.20	0.122 ± 0.008 3.10 ± 0.20	0.024 ± 0.004 0.60 ± 0.10	0.050 1.27	0.028 ± 0.008 0.70 ± 0.20	0.020 ± 0.008 0.50 ± 0.20	0.014 ± 0.006 0.35 ± 0.15	-	inches mm



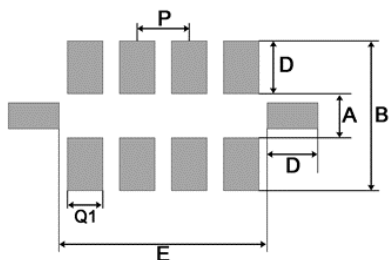
Recommended Pad Layout



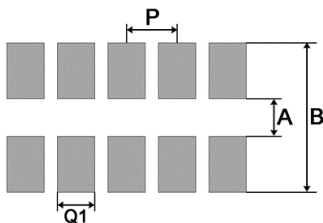
Type	A	B	P	Q1	Q2	Unit
RACF104D	0.020 0.50	0.079 2.00	0.020 0.50	0.011 0.28	0.009 0.22	inches mm



Type	A	B	P	Q1	Q2	Unit
RACF164D	0.031 0.80	0.102 2.60	0.031 0.80	0.020 0.50	0.012 0.30	inches mm
RACF324D	0.087 2.20	0.165 4.20	0.050 1.27	0.028 0.70	0.022 0.57	inches mm



Type	A	B	D	E	P	Q1	Unit
RACF408M	0.039 1.00	0.118 3.00	0.039 1.00	0.134 3.40	0.031 0.80	0.020 0.50	inches mm



Type	A	B	P	Q1	Unit
RACF648N / 648R	0.031 0.80	0.122 3.10	0.050 1.27	0.028 0.70	inches mm

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)
RACF	Thick Film Surface Mount Chip Resistor Array Concave Terminations	SMD	YES(1)	100% Matte Sn over Ni	Jan-04	04/01

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

"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.

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

R	A	C	F	1	6	4	D	J	T	1	0	K	0
Product Series		Power Rating		Tolerance			Packaging				Resistance Value		
RACF	Concave RoHS	Code	W	Code	Tol	Value	Code	Description	Size	Quantity	Four characters with the multiplier used as the decimal holder.		
		102D	0.063	F	1%	E24, E96		Reel - Paper Tape	102D, 104D	10000	1 ohm = 1R00		
		104D	0.063	S	2%	E24		Reel - Plastic Tape	164D	5000	100 Kohm = 100K		
		164D	0.063	J	5%				324D, 408M	4000	1 Mohm = 1M00		
		324D	0.125	Z	jumper				648N, 648R		Zero ohm jumper = 0R00		
		408M	0.063										
		648N	0.063										
		648R	0.063										

D = Isolated
M, N, R = Bussed