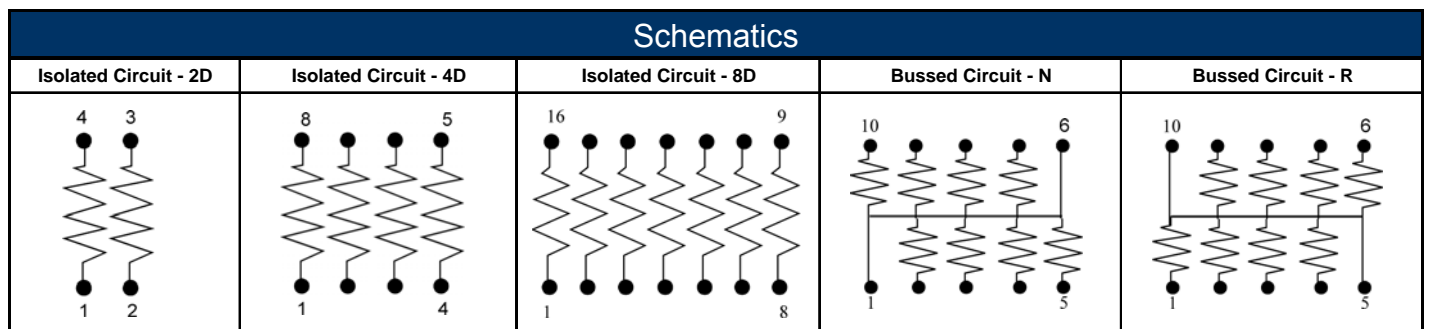


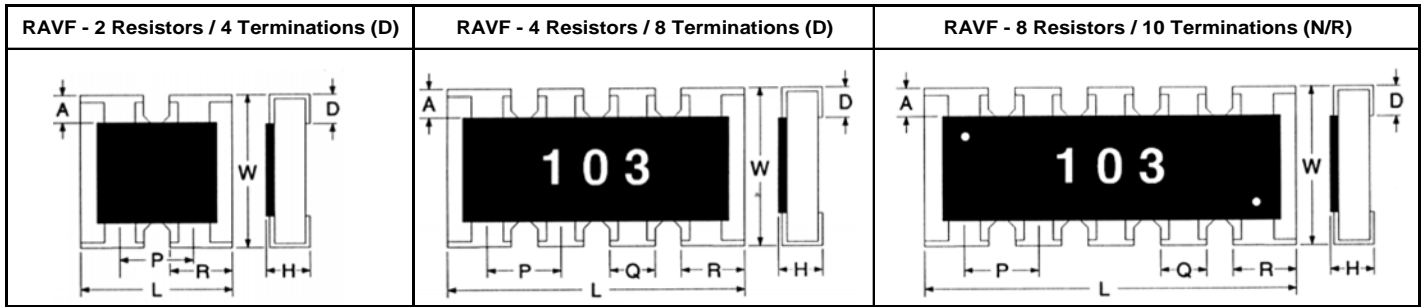
- Features:
- Thick film resistor element
  - Multiple circuit types available
  - Ideal SMD substitute for leaded networks
  - RoHS compliant / lead-free
  - Auto-placement capability
  - Square corner construction standard
  - Zero ohm jumper available
  - RAVF 324D is standard with scalloped corner



Electrical Specifications							
Type / Code / # of Elements / Circuit Type	Power Rating (per element) @ 70°C	Power Rating (Entire Array) @ 70°C	Maximum Working Voltage (1)	Maximum Overload Voltage	Resistance Temperature Coefficient	Ohmic Range (Ω) and Tolerance	
						1%	2%, 5%
RAVF 052D	0.031W	0.063W	12.5V	25V	±200 ppm/°C ±300 ppm/°C ±500 ppm/°C	-	1K - 1M 10 - 1K 3 - 10
RAVF 102D	0.063W	0.125W	25V	50V	±200 ppm/°C ±300 ppm/°C	10 - 1M -	10 - 1M 1 - 9.9
RAVF 104D	0.063W	0.250W	25V	50V	±200 ppm/°C ±300 ppm/°C	10 - 1M -	10 - 1M 1 - 9.9
RAVF 162D	0.063W	0.125W	50V	100V	±200 ppm/°C	10 - 1M	1 - 10M
RAVF 164D	0.063W	0.250W	50V	100V	±200 ppm/°C	10 - 1M	1 - 10M
RAVF 168D	0.063W	0.500W	25V	50V	±200 ppm/°C ±250 ppm/°C	10 - 1M -	- 1 - 1M
RAVF 324D	0.125W	0.250W	200V	400V	±200 ppm/°C	22 - 1M	10 - 1M
RAVF 328N	0.063W	0.500W	25V	50V	±200 ppm/°C	-	22 - 1M
RAVF 328R	0.063W	0.500W	25V	50V	±200 ppm/°C	-	22 - 1M

(1) Lesser of  $\sqrt{PR}$  or maximum working voltage.





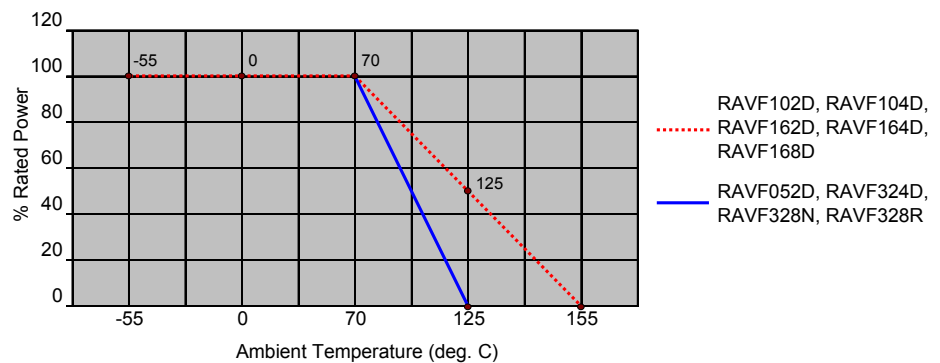
**Mechanical Specifications**

Type / Code / # of Elements / Circuit Type	L Body Length	W Body Width	H Body Height	P Element Spacing	Q Termination Width	R Termination Width	D Bottom Termination	A Top Termination	Unit
RAVF 052D	0.031 ± 0.004 0.8 ± 0.1	0.024 ± 0.004 0.6 ± 0.1	0.012 ± 0.002 0.3 ± 0.05	(0.02) (0.50)	- -	0.014 ± 0.004 0.35 ± 0.1	0.006 ± 0.002 0.15 ± 0.05	0.006 ± 0.004 0.15 ± 0.1	Inches mm
RAVF 102D	0.039 ± 0.004 1 ± 0.1	0.039 ± 0.004 1 ± 0.1	0.014 ± 0.004 0.35 ± 0.1	0.026 ± 0.002 0.65 ± 0.05	-	0.013 ± 0.002 0.33 ± 0.05	0.01 ± 0.002 0.25 ± 0.05	0.006 ± 0.004 0.15 ± 0.1	Inches mm
RAVF 104D	0.079 ± 0.008 2 ± 0.2	0.039 ± 0.006 1 ± 0.15	0.014 ± 0.006 0.35 ± 0.15	0.02 ± 0.006 0.5 ± 0.15	0.016 ± 0.008 0.4 ± 0.2	0.016 ± 0.006 0.4 ± 0.15	0.01 ± 0.004 0.25 ± 0.1	0.008 ± 0.004 0.2 ± 0.1	Inches mm
RAVF 162D	0.063 ± 0.006 1.6 ± 0.15	0.063 ± 0.006 1.6 ± 0.15	0.02 ± 0.006 0.5 ± 0.15	0.031 ± 0.002 0.8 ± 0.05	-	0.024 ± 0.006 0.6 ± 0.15	0.012 ± 0.006 0.3 ± 0.15	0.012 ± 0.006 0.3 ± 0.15	Inches mm
RAVF 164D	0.126 ± 0.008 3.2 ± 0.2	0.063 ± 0.008 1.6 ± 0.2	0.02 ± 0.004 0.5 ± 0.1	0.031 ± 0.002 0.8 ± 0.05	0.02 ± 0.004 0.5 ± 0.1	0.02 ± 0.004 0.5 ± 0.1	0.012 ± 0.006 0.3 ± 0.15	0.012 ± 0.008 0.3 ± 0.2	Inches mm
RAVF 168D	0.158 ± 0.008 4.0 ± 0.2	0.063 ± 0.006 1.6 ± 0.15	0.016 ± 0.004 0.4 ± 0.1	0.02 ± 0.006 0.5 ± 0.15	0.012 ± 0.004 0.3 ± 0.1	0.016 ± 0.004 0.4 ± 0.1	0.012 ± 0.008 0.3 ± 0.2	0.012 ± 0.008 0.3 ± 0.2	Inches mm
RAVF 324D	0.2 ± 0.008 5.08 ± 0.2	0.122 ± 0.008 3.1 ± 0.2	0.022 ± 0.004 0.55 ± 0.1	0.5 ± 0.004 1.27 ± 0.1	0.031 ± 0.008 0.8 ± 0.2	-	0.012 ± 0.008 0.3 ± 0.2	0.02 ± 0.008 0.5 ± 0.2	Inches mm
RAVF 328N	0.126 ± 0.006 3.2 ± 0.15	0.063 ± 0.006 1.6 ± 0.15	0.02 ± 0.004 0.55 ± 0.1	0.025 ± 0.002 0.64 ± 0.05	0.013 ± 0.006 0.34 ± 0.15	0.019 ± 0.006 0.49 ± 0.15	0.01 ± 0.006 0.25 ± 0.15	0.012 ± 0.008 0.3 ± 0.2	Inches mm
RAVF 328R	0.126 ± 0.006 3.2 ± 0.15	0.063 ± 0.006 1.6 ± 0.15	0.02 ± 0.004 0.55 ± 0.1	0.25 ± 0.002 0.64 ± 0.05	0.013 ± 0.006 0.34 ± 0.15	0.019 ± 0.006 0.49 ± 0.15	0.01 ± 0.006 0.25 ± 0.15	0.012 ± 0.008 0.3 ± 0.2	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%

Power Derating Curve:



**How to Order**

SEI Type	Code	Number of Elements	Circuit Type	Nominal Resistance	Tolerance	Packaging
<b>RAVF</b>	<b>16</b>	<b>4</b>	<b>D</b>	<b>10K</b>	<b>5%</b>	<b>R</b>

Type	Description	Code	Elements	Circuit Type	Tolerance	Values	SEI Types	Pkg Qty	Description	Code
RAVF	Convex	05	2	D = Isolated	1%	E24	052D, 102D, 104D	10,000	tape and reel	R
		10	4	N = Bussed	2%	E24	162D, 164D, 168D, 328N, 328R	5,000		
		16	8	R = Bussed	5%	E24	324D	4,000		
		32								

New part number format starting January 3<sup>rd</sup>, 2011:

**How to Order**

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

Product Series	Size	Power	Tolerance(1)		Packaging			Resistance Value
RAVF Convex RoHS	052D	0.031W	F	1%	T	tape and reel	052D, 102D, 104D	10,000
	102D	0.063W	G	2%			162D, 164D, 168D	5,000
	104D	0.063W	J	5%			328N, 328R	
	162D	0.063W					324D	4,000
	164D	0.063W						
	168D	0.063W						
	324D	0.125W						
	328N	0.063W						
	328R	0.063W						

Note (1): 1% tolerance is available in E24 values only. E96 values are generally not available. Contact factory for details.

D = Isolated  
N = Bussed  
R = Bussed

Resistance Value: Four characters with the multiplier used as the decimal holder.  
10 ohm = 10R0  
10.2 Kohm = 10K2  
1 Mohm = 1M00