

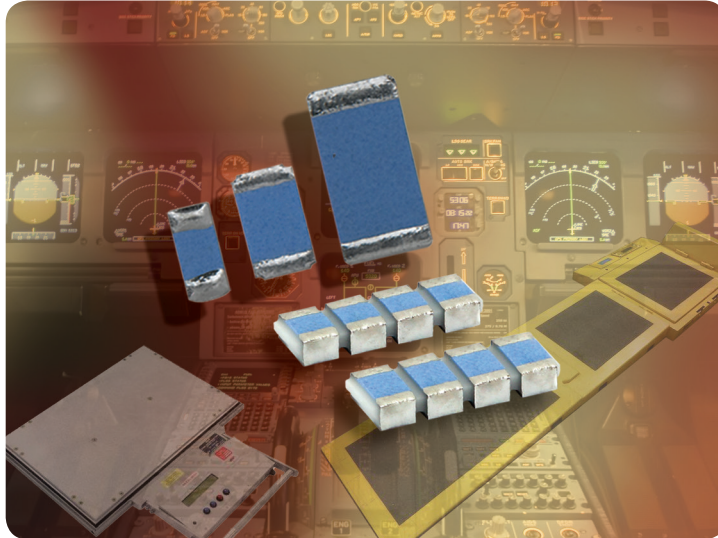


THIN FILM RESISTOR ARRAYS

PRA

Resistors Network: Unique Ultra-Stable Chip Arrays

High-Precision Thin Film Chip Resistor Arrays



KEY BENEFITS

- **Smallest sizes now available (PRA073 and PRA074)**
- Unique ultra-stable resistive layer: 0.02 % drift on ratio after 1000 hours at nominal power at 70 °C
- Special patterning and laser trimming
- ESCC-qualified version: PRAHR
- High-temperature version (230 °C): PRAHT
- Less than 0.03 % combined relative error. Within a set of resistors, combined error is the sum of:
 - The initial ratio tolerancing at room temperature
 - The reversible drift in the range of -40 °C to +125 °C
 - The load life drift after 2000 hours at 70 °C under Pn
- RoHS available

APPLICATIONS

- Applications requiring precision sets of resistor elements
- Instrumentation, calibration, and data conversion

RESOURCES

- Datasheet: PRA - <http://www.vishay.com/doc?53033>
- For technical questions contact sferthinfilm@vishay.com



RoHS
COMPLIANT

GREEN
(5-2008)
Available

One of the World's Largest Manufacturers of
Discrete Semiconductors and Passive Components



High-Precision Thin Film Chip Resistor Arrays



PRA arrays can be used in most applications requiring a matched pair (or set) of resistor elements. The networks provide 1 ppm/°C TCR tracking, a ratio tolerance as tight as 0.01 % and outstanding stability. They are available in 0.7 mm, 1 mm, 1.35 mm, and 1.82 mm pitch.

FEATURES

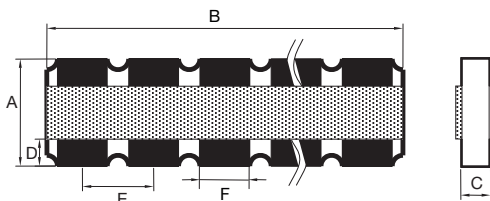
- High stability passivated nichrome resistive layer 0.02 % on ratio, 1000 h at Pn at + 70 °C
- Tight TCR (10 ppm/°C) and TCR tracking (to 1 ppm/°C)
- Very low noise < - 35 dB and voltage coefficient < 0.01 ppm/V
- Ratio tolerance to 0.01 % ($R \geq 200R$)
- High temperature (230 °C) version see PRA HT
- ESA qualified version see PRA HR
- SMD wraparound chip resistor array
- Thin film technology
- Option to withstand humidity test of AEC-Q200
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

TYPICAL PERFORMANCE

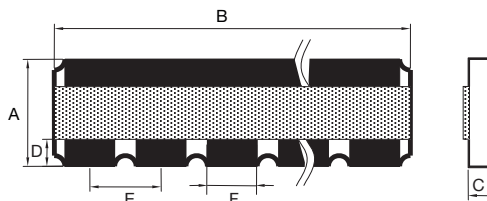
	ABSOLUTE	TRACKING
TCR	10 ppm/°C	2 ppm/°C
	ABSOLUTE	RATIO
TOL.	0.1 %	0.01 %

DIMENSIONS

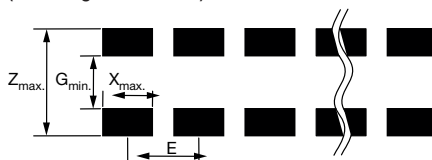
Independent resistors



One common point



Suggested land pattern (according to IPC-7351A)



DIM.	PRA073		PRA074		PRA100		PRA135		PRA182	
	mm	mil	mm	mil	mm	mil	mm	mil	mm	mil
A	0.75 ± 0.152	29.5 ± 6	1.00 ± 0.152	40 ± 6	1.52 ± 0.152	60 ± 6	1.91 ± 0.152	75 ± 6	3.06 ± 0.152	120 ± 6
B	B = N x E (± 0.2 mm) B = N x E (± 8 mil)									
C	0.5 ± 0.127	20 ± 5	0.5 ± 0.127	20 ± 5	0.5 ± 0.127	20 ± 5	0.5 ± 0.127	20 ± 5	0.5 ± 0.127	20 ± 5
D	0.15 ± 0.08	5.9 ± 3	0.25 ± 0.1	10 ± 4	0.38 ± 0.13	15 ± 5	0.38 ± 0.13	15 ± 5	0.4 ± 0.13	16 ± 5
E	0.7	27.5	0.7	27.5	1	40	1.35	53	1.825	72
F	0.55 ± 0.1	21.5 ± 4	0.55 ± 0.1	21.5 ± 4	0.7 ± 0.1	27.6 ± 4	1.05 ± 0.1	41.4 ± 4	1.525 ± 0.1	6 ± 4
G _{min.}	0.28	11	0.29	11.4	0.49	19.3	0.88	34.5	1.99	78.3
X _{max.}	0.51	20	0.51	20	0.66	26	1.01	39.8	1.49	58.7
Z _{max.}	1.8	70.9	2.05	80.7	2.57	101.2	2.96	116.5	4.11	161.8

Note

- N represents number of resistors

Revision 14-Nov-12