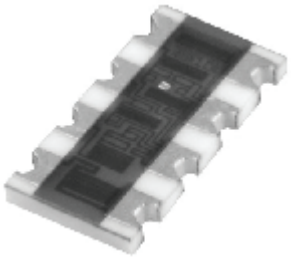
High Precision Resistor Arrays, Surface Mount Network



Product may not be to scale

PR arrays can be used in most applications requiring a matched pair (or set) of resistor elements. The networks provide 2 ppm/°C TCR tracking, a ratio tolerance as tight as 0.02 % and outstanding stability. They are available in 1 mm, 1.35 mm and 1.82 mm pitch.

FEATURES

- Gold terminations over nickel barrier
- High stability passivated nichrome resistive layer
- Tight TCR (10 ppm/°C) and TCR tracking (to 2 ppm/°C)
- Very low noise and voltage coefficient < - 30 dB, 0.1 ppm/V typical
- Ratio tolerance to 0.02 %
- Compliant to RoHS directive 2002/95/EC

Pb-free

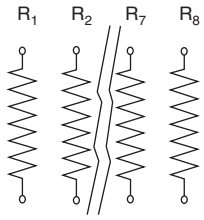
e4

RoHS COMPLIANT

SCHEMATIC

Schematic A: Independent Resistors

Electrical Diagram

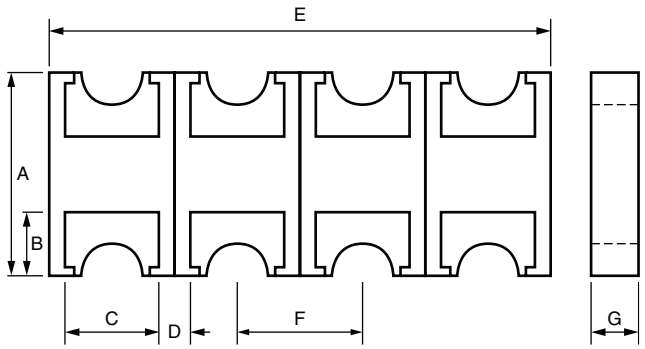


Number of Resistors: 2 to 8

$R_1 = R_2 = ... R_8$

STANDARD ELECTRICAL SPECIFICATIONS		
TEST	**SPECIFICATIONS**	**CONDITIONS**
Material	Passivated nichrome	-
Pin/Lead Number	-	-
Resistance Range	100 Ω to 200 kΩ (PR100) 100 Ω to 300 kΩ (PR135) 100 Ω to 1 MΩ (PR182)	-
TCR: Absolute	± 10 ppm/°C	- 55 °C to + 125 °C
TCR: Tracking	± 2 ppm/°C	- 55 °C to + 125 °C
Tolerance: Absolute	± 0.1 % to ± 10 %	-
Tolerance: Ratio	± 0.02 % to ± 0.1 %	-
Power Rating: Resistor	100 mW (PR100) 125 mW (PR135) 200 mW (PR182)	At + 70 °C
Power Rating: Package	-	-
Stability: Absolute	-	-
Stability: Ratio	-	-
Voltage Coefficient	≤ 0.1 ppm/V	-
Working Voltage	35 V (PR100) 75 V (PR135) 100 V (PR182)	-
Operating Temperature Range	- 55 °C to + 125 °C	-
Storage Temperature Range	- 55 °C to + 150 °C	-
Noise	≤ - 30 dB	-
Thermal EMF	-	-
Shelf Life Stability: Absolute	-	-
Shelf Life Stability: Ratio	-	-

DIMENSIONS in mils



DIMENSION	PR100	PR135	PR182
A	64 ± 6	72 ± 6	118 ± 6
B	17	20.3	23.6
C	30	43.3	61.8
D	10	10	10
E (1)	E = (N x F) ± 8	E = (N x F) ± 8	E = (N x F) ± 8
F	40	53.3	71.8
G	15	15	15

Notes

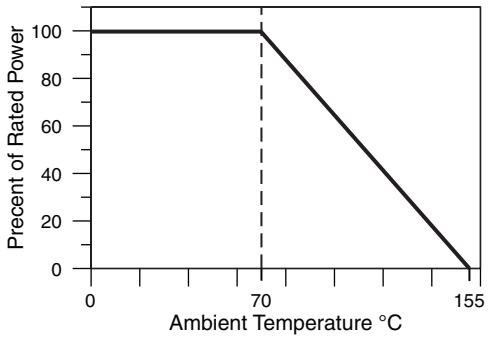
(1) Where “N” = Number of resistors

- ± 2 mils unless specified

MECHANICAL SPECIFICATIONS

Substrate	Alumina 99.6 %
Technology	Thin Film
Film	Passivated nichrome
Terminations	Solderable gold (Au) over nickel

DERATING CURVE



PACKAGING

Waffle-pack or tape and reel

MARKING

On the primary package, printed information includes Vishay trademark series and model, schematic number of resistors, ohmic value, absolute tolerance, ratio tolerance, type of termination

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: PR100A41002BBGTS

P	R	1	0	0	A	4	1	0	0	2	B	B	G	T	S

GLOBAL MODEL	SCHEMATICS	NUMBER OF RESISTORS	RESISTANCE	ABSOLUTE TOLERANCE	RATIO TOLERANCE	TERMINATION	PACKAGING
PR100 **PR135** **PR182**	**A** = Isolated resistors	**2** **3** **4** **5** **6** **7** **8**	First 3 digits are significant figures and the last digit specifies the number of zeros to follow. Example: 1000 = 100 Ω 1001 = 1000 Ω	**B** = 0.1 % **C** = 0.25 % **D** = 0.5 % **F** = 1 % **G** = 2 % **J** = 5 % **K** = 10 %	**P** = 0.02 % (1) **W** = 0.05 % (2) **B** = 0.1 % **C** = 0.25 % **D** = 0.5 % **F** = 1 %	**G** = Wraparound Au over Ni termination e4 epoxy solderable	**WS** = WAFFLE 100 min., 1 mult **TS** = TAPE AND REEL (3) 100 min., 1 mult **T0** = 100 min., 100 mult **T1** = 1000 min., 1000 mult **T3** = 300 min., 300 mult **T5** = 500 min., 500 mult

Historical Part Number example: PR100A41002BBGT (for reference purposes only)

PR100	A	4	1002	B	B	G	T
SERIES	SCHEMATIC	NUMBER	RESISTANCE	ABSOLUTE TOLERANCE	RATIO TOLERANCE	TERMINATION	PACKAGING

Notes

(1) > 1 kΩ, max. 4 resistors

(2) > 100 Ω, up to 8 resistors

(3) Please refer to below table for tape and reel availability

TAPE AND REEL AVAILABILITY

NUMBER OF RESISTORS	PR100	PR135	PR182
2	Available	Available	Available
3	••	Available	••
4	Available	Available	Available
5	••	Available	Available
6	Available	Available	••
7	••	Available	••
8	Available	••	••

Note

•• Not available, consult factory

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