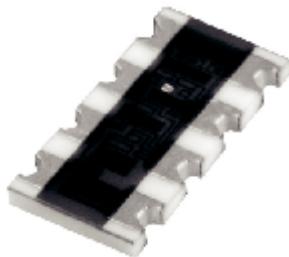


## High Precision Thin Film Network, Surface Mount Leadless Resistor Arrays



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 %
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

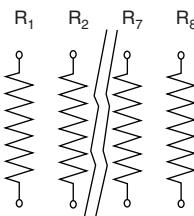


**RoHS**  
COMPLIANT  
HALOGEN  
FREE

### SCHEMATIC

Schematic A: Independent Resistors

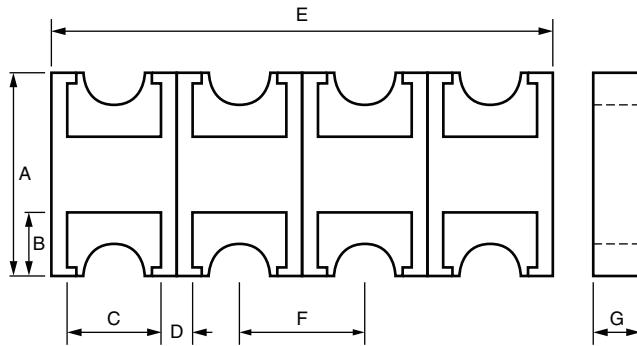
Electrical Diagram



Number of Resistors: 2 to 8

$R_1 = R_2 = \dots = R_8$

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 <sup>(1)</sup>	$E = (N \times F) \pm 8$	$E = (N \times F) \pm 8$	$E = (N \times F) \pm 8$
F	40	53.3	71.8
G	15	15	15

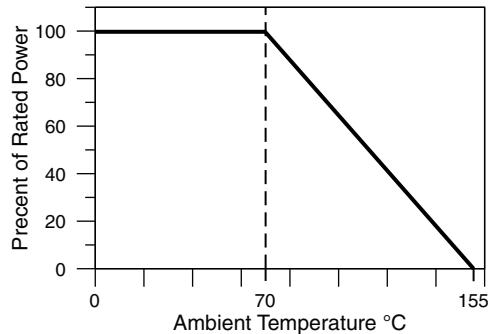
**Notes**

- ± 2 mils unless specified

<sup>(1)</sup> Where "N" = Number of resistors

**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: 10R0 = 10 Ω 12R5 = 12.5 Ω 1000 = 100 Ω 1001 = 1000 Ω	B = 0.1 % C = 0.25 % D = 0.5 % F = 1 % G = 2 % J = 5 % K = 10 %	Q = 0.01 % <sup>(1)</sup> P = 0.02 % <sup>(2)</sup> W = 0.05 % <sup>(3)</sup> B = 0.1 % C = 0.25 % D = 0.5 % F = 1 %	G = Wraparound Au over Ni termination e4 lead (Pb)-free RoHS compliant	TAPE AND REEL <sup>(4)</sup> T0 = 100 min., 100 mult T1 = 1000 min., 1000 mult T3 = 300 min., 300 mult T5 = 500 min., 500 mult TF = Full reel TS = 100 min., 1 mult TI = 100 min., 1 mult <sup>(5)</sup> TP = 100 min., 1 mult <sup>(6)</sup> WAFFLE WS = 100 min., 1 mult WS = 100 min., 1 mult <sup>(5)</sup> WS = 100 min., 1 mult <sup>(6)</sup>

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) 10 kΩ, up to 4 resistors
- (2) > 1 kΩ, max. 4 resistors
- (3) > 100 Ω, up to 8 resistors
- (4) Please refer to below table for tape and reel availability
- (5) Item single lot date code
- (6) Package unit single lot date code

**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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**Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.**

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