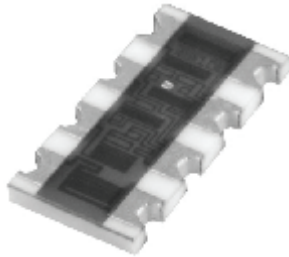


## High Precision Thin Film Network, Surface-Mount Leadless Resistor Arrays



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 0.01 % and outstanding stability. They are available in 1 mm, 1.35 mm and 1.82 mm pitch.

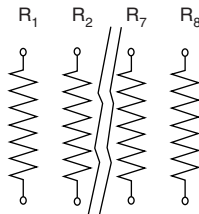
### FEATURES

- Gold or soldered 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 ± 0.01 %
- 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	± 0.01 % 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	-	-

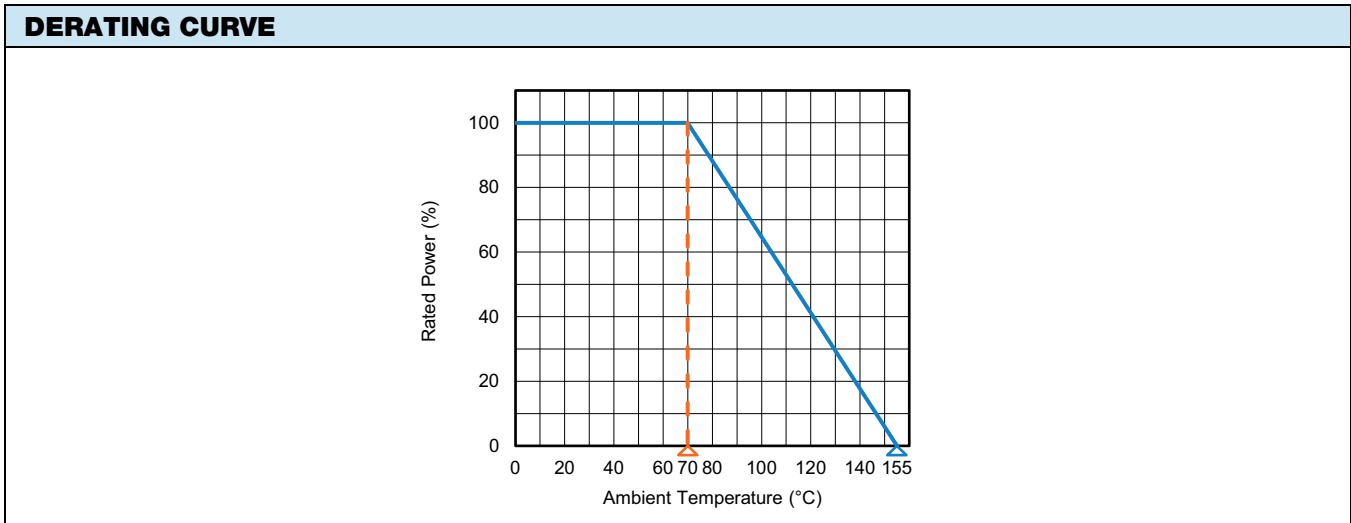


DIMENSIONS in mils (mm)				
	DIMENSION	PR100	PR135	PR182
	A	58 ± 6 (1.4732 ± 0.152)	72 ± 6 (1.8288 ± 0.152)	118 ± 6 (2.9972 ± 0.152)
	B	17 (0.432)	20.3 (0.516)	23.6 (0.599)
	C	30 (0.762)	43.3 (1.100)	61.8 (1.570)
	D	10 (0.254)	10 (0.254)	10 (0.254)
	E <sup>(1)</sup>	$E = (N \times F) \pm 8$ (0.203)	$E = (N \times F) \pm 8$ (0.203)	$E = (N \times F) \pm 8$ (0.203)
	F	40 (1.016)	53.3 (1.354)	71.8 (1.824)
	G	15 (0.381)	15 (0.381)	15 (0.381)

**Notes**

- ± 2 mils (± 0.051 mm) unless specified
- (1) Where "N" = number of resistors

MECHANICAL SPECIFICATIONS	
Substrate	Alumina 99.6 %
Technology	Thin Film
Film	Passivated nichrome
Terminations	Pre-soldered or gold
Lead (Pb)-Free Option	100 % Sn
Tin / Lead Option	SnPb
Lead (Pb)-Free Finish And Tin / Lead	Electroplated



**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
P	R	1	3	5	A	2	2	5	0	2	F	D	B	T	1
P	R	1	3	5	A	2	5	0	0	2	D	C	S	T	1
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 %	B = wraparound Sn/Pb solder w/nickel barrier G = wraparound Au over Ni (gold) termination epoxy bondable RoHS-compliant - e4 S = wraparound electroplated 100 % pure matte tin RoHS-compliant - e3	TAPE AND REEL <sup>(4)</sup> T0 = 100 min., 100 mult. T1 = 1000 min., 1000 mult. <sup>(7)</sup> 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) ≥ 1 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
- (7) Marketing preferred packaging

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



## **Disclaimer**

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Vishay products are not designed for use in life-saving or life-sustaining applications or any application in which the failure of the Vishay product could result in personal injury or death unless specifically qualified in writing by Vishay. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.