PR100, PR135, PR182

Vishay Dale Thin Film





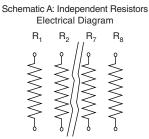
PR arrays can be used in most applications requiring a matched pair (or set) of resistor elements. The networks provide 2 ppm/°C TCR tracking, a ratio tolerance as tight as 0.01 % and outstanding stability. They are available in 1 mm, 1.35 mm and 1.82 mm pitch.

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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
 RoHS COMPLIANT HALOGEN
- Ratio tolerance to ± 0.01 %
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

SCHEMATIC



Number of Resistors: 2 to 8 $R_1 = R_2 = \dots R_8$

TEST	SPECIFICATIONS	CONDITIONS	
Material	Passivated nichrome	-	
Pin/Lead Number	-	_	
	100 Ω to 200 kΩ (PR100)		
Resistance Range	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 %	-	
	100 mW (PR100)		
Power Rating: Resistor	125 mW (PR135)	At +70 °C	
	200 mW (PR182)		
Power Rating: Package	-	-	
Stability: Absolute	-	-	
Stability: Ratio	-	-	
Voltage Coefficient	≤ 0.1 ppm/V	-	
	35 V (PR100)		
Working Voltage	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	-	_	

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1 For technical questions, contact: <u>thinfilm@vishay.com</u> Document Number: 53039

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FREE

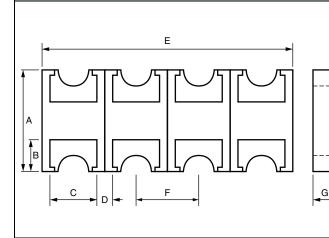




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DIMENSIONS in mils (mm)



	DIMENSION PR100		PR135	PR182	
	А	58 ± 6 (1.4732 ± 0.152)	72 ± 6 (1.8288 ± 0.152)	118 ± 6 (2.9972 ± 0.152)	
	В	17 (0.432)	20.3 (0.516)	23.6 (0.599)	
	С	30 (0.762)	43.3 (1.100)	61.8 (1.570)	
	D	10 (0.254)	10 (0.254)	10 (0.254)	
	E ⁽¹⁾	E = (N x F) ± 8 (0.203)	$E = (N \times F) \pm 8$ (0.203)	$E = (N \times F) \pm 8$ (0.203)	
, T	F 40 (1.016)		53.3 (1.354)	71.8 (1.824)	
	G	15 (0.381)	15 (0.381)	15 (0.381)	

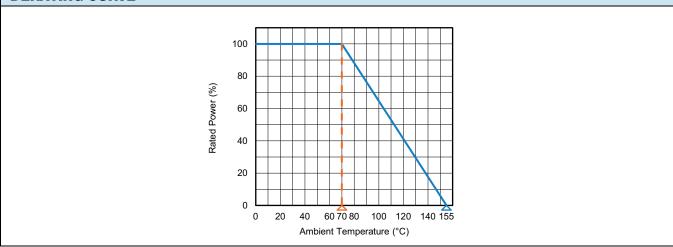
Notes

• ± 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			

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

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GLOBAL PART NUMBER INFORMATION								
New Global Par	TS							
P R	」(」(] 「1] 「	0 0 3 5	A 4				B G D B	T 1
P R		3 5	A 2	5 0			C S	T 1
GLOBAL MODEL SCHE	MATICS	NUMBER OF ESISTORS	RESISTANCE	ABSOLUTE TOLERANCE	RATIO TOLERANCE	TERMI	NATION	PACKAGING
PR135 PR182	solated resistors	5 6 7 8	First 3 digits are significant figures and the last digit specifies the number of zeros to follow. Example: $10R0 = 10 \Omega$ $12R5 = 12.5 \Omega$ $1000 = 100 \Omega$ $1001 = 1000 \Omega$	B = 0.1 % C = 0.25 % D = 0.5 % F = 1 % G = 2 % J = 5 % K = 10 %		G = wraparo over Ni (terminat epoxy b RoHS-cc S = wraparo electrop pure ma	older barrier und Au gold) ion ondable ompliant - e4 und lated 100 %	$\begin{array}{r} \text{TAPE AND REEL} \ ^{(4)} \\ \text{T0} = 100 \ \text{min.}, \\ 100 \ \text{mult.} \\ \text{T1} = 1000 \ \text{min.}, \\ 1000 \ \text{mult.} \ ^{(7)} \\ \text{T3} = 300 \ \text{min.}, \\ 300 \ \text{mult.} \\ \text{T5} = 500 \ \text{min.}, \\ 500 \ \text{mult.} \\ \text{TF} = full \ \text{reel} \\ \text{TS} = 100 \ \text{min.}, \\ 1 \ \text{mult.} \ ^{(5)} \\ \text{TP} = 100 \ \text{min.}, \\ 1 \ \text{mult.} \ ^{(6)} \\ \text{WAFFLE} \\ \begin{array}{r} \text{WS} = 100 \ \text{min.}, \\ 1 \ \text{mult.} \ ^{(5)} \\ \text{WS} = 100 \ \text{min.}, \\ 1 \ \text{mult.} \ ^{(6)} \\ \end{array}$
Historical Part I PR100	A Number Exam	<u> </u>	,		B	В	G	Т

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

Notes

⁽¹⁾ \geq 1 k Ω , up to 4 resistors

 $^{(2)}$ > 1 k Ω , 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

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