Network Precision Resistor

UPRND Networks High Precision Sharpen The Edge of Application Accuracy

Preview

The Precision Resistor Network technology provides a significant reduction of the resistive component's sensitivity to ambient temperature variations (TCR).

Designers can now guarantee a high degree of stability and accuracy in fixed-resistor applications using solutions based on Token's revolutionary Network technology. This technology allows customer orientated products, designed to satisfy challenging and specific technical requirements.

Precision Network Resistors UPRND Series meets Lead (Pb)-free and RoHS compliant. Known for providing design engineers with a comprehensive range of industrial-qualified resistive devices, Token Electronics has further expanded its precision product capabilities in Serial UPRNS and Parellel UPRND Series.

Providing design engineers with an economical power resistor with high quality performance, Token Electronics offers low cost industrial grade resistor networks, Parellel UPRND and Serial UPRNS Networks.

Token's UPRND/UPRNS Series are assembled by EE/RE 1/10 series to form a stable, high precision resistor networks. Characteristic of UPRND Series meet extreme low temperature coefficient.

Parellel UPRND Series equate IRC, EBG Precision Devices with fast delivery and more competitive price. For non-standard technical requirements and special applications, please contact us.

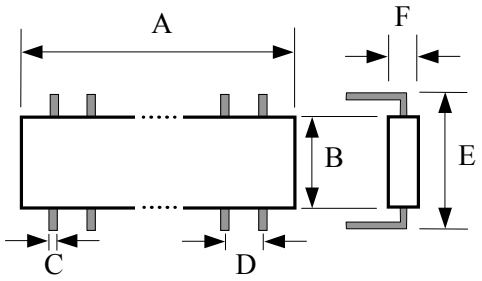
Applications :

- Industrial, Precision Bypass, Divider.
- Electron Beam (EB) Applications Scanning.
- Medical, Test and Measurement Equipment.
- Recording Equipment, Electron Microscopes.
- Military, airborne, High precision instrumentation.
- Precision Amplifiers, Audio (High End Stereo Equipment).

Features :

- Lead (Pb)-free and RoHS compliant.
- Precision tolerance tight to A2(±0.02%).
- Any value available within resistance range.
- UPRND: Parellel dip type; UPRNS: Serial dip type.
- Metal film precision networks, excellent stability and reliability.
- Superior TCR narrowed to Absolute C7(±5 ppm/°C), Relative C10(±2 ppm/°C).

Dimensions & Technical Characteristics

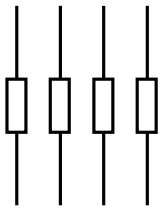


Precision Resistor Network (UPRND) Dimensions

UPRND A(mm)±0.5		5.08	11.8	30.3
Number of Resistors #		2	4	11
Dimensions(mm)	A	5.08±0.5 ~ 30.3±0.5		
	B	9.0±0.5		
	C	0.6±0.05		
	D	2.54±0.05		
	E	11.5±0.5		
	F	3.0±0.5		
Rated Wattage of one element unit at 70°C (W)		0.1		
Maximum Working Voltage (V)		200		
Nominal Resistance Range of component element unit (Ω)		10 ~ 1M		
Absolute Tolerance (%)		A2(±0.02), A5(±0.05), B(±0.1), C(±0.25), D(±0.5), F(±1.0)		
Relative Tolerance (%)		T(±0.01), A2(±0.02), A5(±0.05), B(±0.1)		
Absolute Temperature Coefficient (ppm/°C)		C7(±5), C6(±10), C5(±15), C3(±25), C2(±50)		
Relative Temperature Coefficient (ppm/°C)		C10(±2), C9(±3), C7(±5), C6(±10), C5(±15)		
Working Temperature (°C)		-10 ~ +70		

Remark : 1. Absolute value means all factors (Tolerance and Temperature Coefficient) of component element units of Network Resistor are independent.
2. Relative value means the maximum difference factor among component element units of Network Resistor.

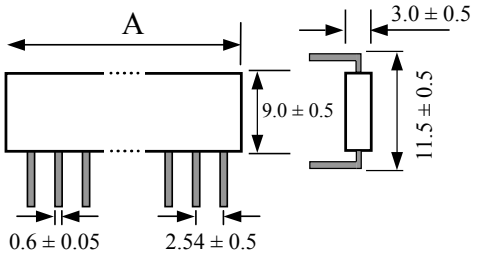
Examples for Construction



Precision Resistor Network (UPRND) Examples for Construction

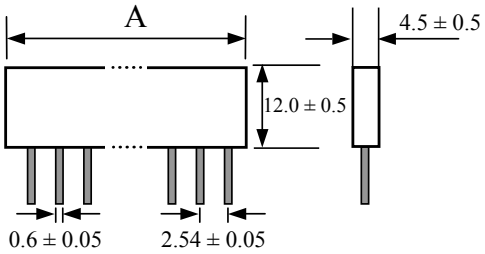
○ There are no standard nominal resistance for UPRNS/UPRND Series.
○ Customer can designate or specify the number of component elements of Network Resistor according with this specification of UPRNS/UPRND Series to meet your own needs.
○ It can be required to Token's representatives if customer's requirement beyonds the range of Token's specifications.

UPRND Versus UPRNS Dimensions



Extra Precision Resistor Network (UPRNS) Dimensions (Unit: mm)

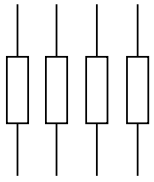
UPRND A ± 0.5	Pins (Number of Resistors)
11.8	4
5.08	2
30.3	11



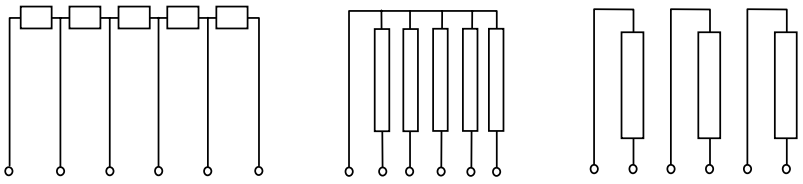
Extra Precision Resistor Network (UPRNS) Dimensions (Unit: mm)

UPRNS A ± 0.5	Pins
14.20	5
16.9	6
19.34	7
21.9	8
24.1	9
27.16	10
35	13
42.3	16
50.8	19

UPRND Versus UPRNS Internal Connection



Precision Resistor Network (UPRND) Examples for Construction



Precision Resistor Network (UPRNS) Examples for Construction

How to Order

UPRND	4	100R	B	C
❶	❷	❸	❹	❺

❶ Part Number: UPRND

❷ Number of Pins: 2, 4, 11

❸ Resistance Value (Ω)

Code	Resistance Value (%)
10R	10Ω
100R	100Ω
1K	1KΩ
1M	1MΩ

❹ Resistance Tolerance (%)

	Code	Resistance Tolerance (%)
Absolute	A2	±0.02 %
	A5	±0.05 %
	B	±0.10 %
	C	±0.25 %
	D	±0.50 %
	F	±1.00 %
Relative	T	±0.01 %
	A2	±0.02 %
	A5	±0.05 %
	B	±0.10 %

❺ Temperature Coefficient (ppm/°C)

	Code	Temperature Coefficient (ppm/°C)
Absolute	C7	±5 ppm/°C
	C6	±10 ppm/°C
	C5	±15 ppm/°C
	C3	±25 ppm/°C
	C2	±50 ppm/°C
Relative	C10	±2 ppm/°C
	C9	±3 ppm/°C
	C7	±5 ppm/S°C
	C6	±10 ppm/°C
	C5	±15 ppm/°C

Back to 1st Page - Precision Resistor Network (UPRND)