

Network Precision Resistor

High Accuracy Networks Save on Resistors (UPRNS)

► Preview

Precision Resistor Network technology outperforms all other resistor technologies available today for applications that require high precision and high stability. This technology has been pioneered and developed by Token, and products based on this technology are the most suitable for a wide range of applications.

This technology with any value available within resistance range allows customer orientated products, designed to satisfy challenging and specific technical requirements.

Precision Network Resistors UPRNS Series meets Lead (Pb)-free and RoHS compliant.

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

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

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

Applications :

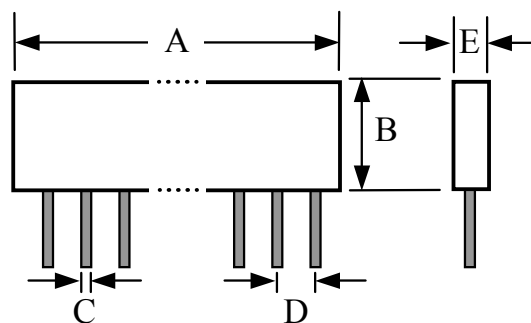
- Industrial, Military, Airborne.
- Electron Beam Applications (EB) Scanning,
- Recording Equipment, Electron Microscopes.
- Medical , Test And Measurement Equipment,
- Precision Divider, Bypass, High Precision Instrumentation,
- Audio (High End Stereo Equipment), Precision Amplifiers.

Features :

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



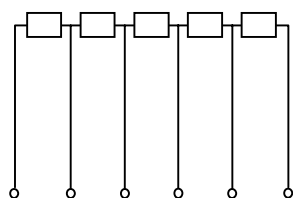
Dimensions & Technical Characteristics



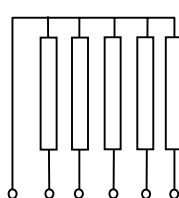
Precision Resistor Network (UPRNS) Dimensions

UPRNS A(mm)±0.5		14.20	16.90	19.34	21.90	24.10	27.16	35.00	42.30	50.80
Number of Pins		5	6	7	8	9	10	13	16	19
Dimensions (mm)	A	14.20±0.5 ~ 50.80±0.5								
	B	12.0±0.5								
	C	0.6±0.05								
	D	2.54±0.05								
	E	4.5±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								

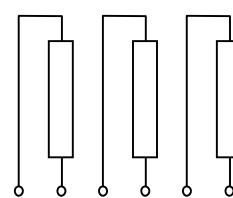
Examples for Construction



TYPE 1



TYPE 2

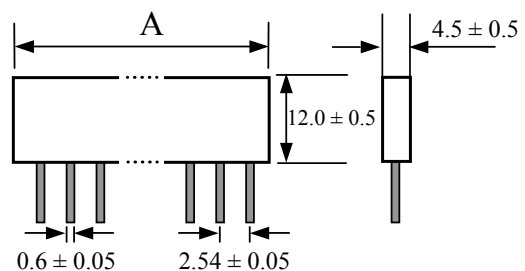


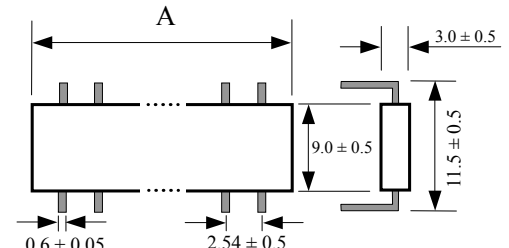
TYPE 3

Precision Resistor Network (UPRNS) Examples for Construction

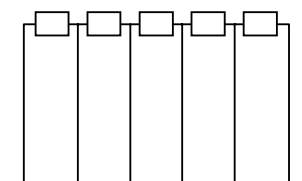
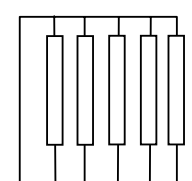
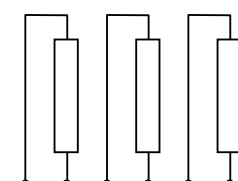
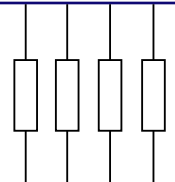
- There are no standard nominal resistance for UPRNS/UPRND Series.
- Customer can designate or specify the number of component elements of Network Resistor according with this specification of UPRNS/UPRND Series to meet your own needs.
- It can be required to Token's representatives if customer's requirement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

▶ UPRNS Versus UPRND Dimensions

 Extra Precision Resistor Network (UPRNS) Dimensions (Unit: mm)	UPRNS $A \pm 0.5$	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

 Extra Precision Resistor Network (UPRNS) Dimensions (Unit: mm)	UPRND $A \pm 0.5$	Pins (Number of Resistors)
	11.8	4
	5.08	2
	30.3	11

▶ UPRNS Versus UPRND Internal Connection

 TYPE 1	 TYPE 2	 TYPE 3	 Precision Resistor Network (UPRND) Examples for Construction
Precision Resistor Network (UPRNS) Examples for Construction			

How to Order

UPRNS

①

8

②

Type1

③

10R

④

B

⑤

C5

⑥

① Part Number: UPRNS

② Number of Pins: 6, 7, 8

③ Construction: Type1, Type2, Type3.

④ Resistance Value (Ω)

Code	Resistance Value (%)
10R	10 Ω
100R	100 Ω
1K1	1.1K Ω
110K	110K Ω
1M	1M Ω

⑤ 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 %

⑥ Temperature Coefficient (ppm/ $^{\circ}$ C)

	Code	Temperature Coefficient (ppm/ $^{\circ}$ C)
Absolute	C7	± 5 ppm/ $^{\circ}$ C
	C6	± 10 ppm/ $^{\circ}$ C
	C5	± 15 ppm/ $^{\circ}$ C
	C3	± 25 ppm/ $^{\circ}$ C
	C2	± 50 ppm/ $^{\circ}$ C
Relative	C10	± 2 ppm/ $^{\circ}$ C
	C9	± 3 ppm/ $^{\circ}$ C
	C7	± 5 ppm/ $^{\circ}$ C
	C6	± 10 ppm/ $^{\circ}$ C
	C5	± 15 ppm/ $^{\circ}$ C

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