Low Noise High Precision Resistors

Metal Thin Film Resistors Define Precision

Preview

The UAR range of high precision resistors represents a significant technical advancement in resistive technology, combining low temperature coefficients with high environmental stabilities, and high frequency performance.

Laser beam trimming gives tolerance accuracies from 0.02 % to 1 %.

The UAR range effectively bridges the gap that has hitherto existed between the high precision, high stability networks or wirewound technology and conventional film technology.

Full lines equate Vishay, IRC, Ohmite, Caddock, Panasonic precision resistors with fast delivery and more competitive price.

The metal film series is RoHS compliant with Pb-free terminations. Detailed specifications, both mechanical and electrical, please contact our sales representative for more information.

Mil-Std-202 Standard :

This standard establishes uniform methods for testing electronic and electrical component parts, including basic environmental tests to determine resistance to deleterious effects of natural elements and conditions surrounding military operations, and physical and electrical tests.

Applications :

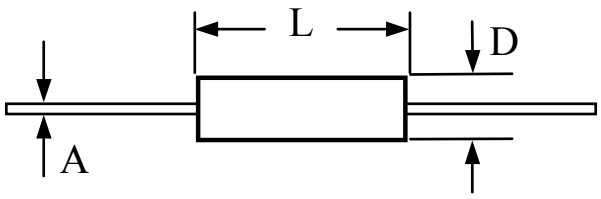
- All General Purpose Applications,
- Medical Electronics, Current Pulse Limiters,
- Precision Instruments, Telecom, Test and Measurement.



Features :

- Very tight tolerances: down to A2(±0.02%).
- Exceptionally low noise; typically 0.05 μV/V.
- 0.125 W to 0.33 W at 85 °C, Electrical Insulation > 1000 MΩ.
- Very Low temperature coefficient: ±3, ±5, ±10 and ±15 ppm/°C.
- Excellent high frequency performance, industrial grades, RoHS Compliant.

Dimensions & Technical Characteristics



High Precision Resistors (UAR) Dimensions

Type		UAR1/4	UAR1/8	UAR1/10
Power Rating at 85°C (W)		0.33	0.25	0.125
Max. Working Voltage (V)		300	300	300
Resistance Range (Ω)		500.0~1.0M	100.0~1.0M	100.0~1.0M
Dimensions (mm)	L±0.3	14.8	10.0	6.8
	D±0.3	5.2	3.7	2.5
	A±0.05	0.6	0.6	0.6

Specification

Tolerance:	±0.02, ±0.05, ±0.10, ±0.25, ±0.5, ±1.0%
Temp. Coefficient:	±3, ±5, ±10, ±15ppm/°C
Standard temperature characteristic:	+25 to 85 °C
on request:	-10 to +85 °C
Noise:	less than 0.05 µV/V
Voltage coefficient:	less than 0.02 ppm/V
Non linearity (3. Harm):	more than (-100)dB
Inductivity:	≤1MHz
Thermal voltage to copper:	1 ~ 3 µV/°C
Isolations Resistance:	$10^{10}\Omega$

Tests According MIL STD 202

Temperature cycling:	0.02%
Low temp. operation:	0.013%
Short time overload:	0.01%
Dielectric strength:	0.01%
Load life:	0.04%
Resistance to soldering heat:	0.012%
Moisture test:	0.050%
Shock-and Vibrations test:	0.015%

How to Order

UAR1/8 ❶ 210R ❷ B ❸ C6 ❹ P ❺

❶ Part Number: UAR1/4
UAR1/8
UAR1/10

❷ Resistance Value (Ω):

Code	Resistance Value (Ω)
10R	10Ω
210R	210Ω
2K1	2.1KΩ
21K	21KΩ

❸ Resistance Tolerance (%)

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

❹ Temperature Coefficient (ppm/°C)

Code	Temperature Coefficient (ppm/°C)
C5	±15ppm/°C
C6	±10ppm/°C
C7	±5ppm/°C
C9	±3ppm/°C

❺ Package: P (Bulk)

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