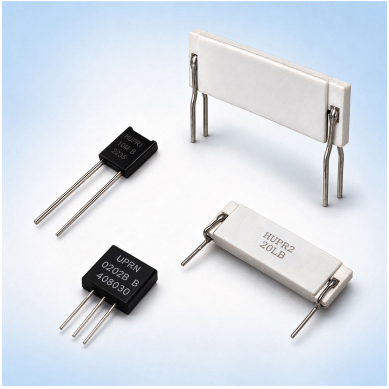
UPR Precision Low-TCR High-Voltage Resistors

Key Features

Resistance Tolerance as Tight as **0.02%**	Max. Withstand Voltage **5 kV**
Resistance Range **100 Ω to 100 MΩ**	TCR as Low as **±2 ppm/°C**



Applications

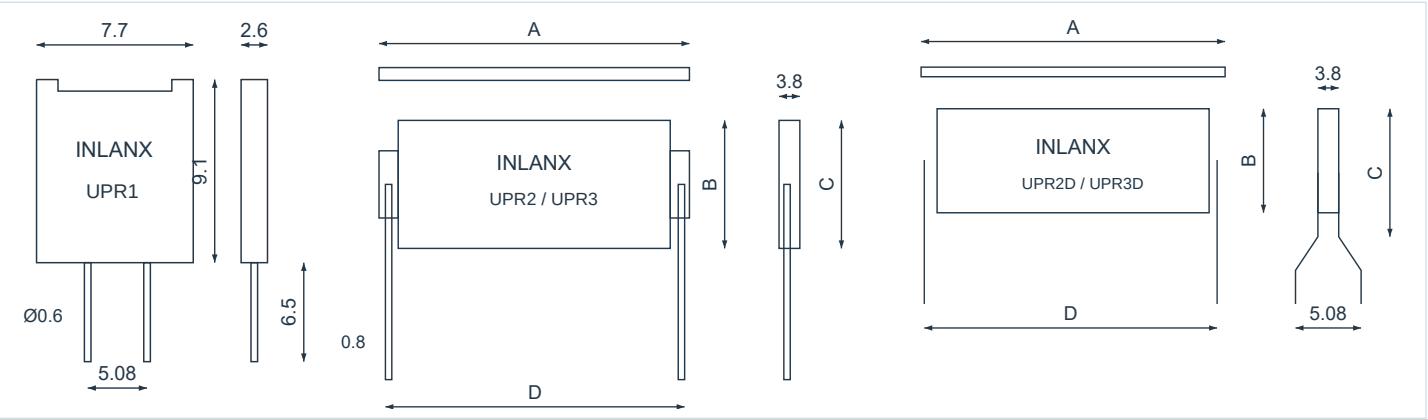
For high-precision, high-voltage instrumentation. These resistors help improve analog equipment performance and offer high reliability and voltage withstand capability.

Electrical Specifications

Model	Power	Max. Working Voltage	Min. Resistance	Max. Resistance	TCR (ppm/°C)	Tolerance (%)
UPR1	1/4 W	500 V	1k0	100M	2 / 5	0.1, 0.05
UPR2	1/2 W	2500 V	100R	100M	2 / 5	0.1, 0.05, 0.02
UPR2D	1/2 W	2500 V	100R	100M	2 / 5	0.1, 0.05, 0.02
UPR3	1 W	5000 V	10K	100M	2 / 5	0.1, 0.05, 0.02
UPR3D	1 W	5000 V	10K	100M	2 / 5	0.1, 0.05, 0.02

Mechanical Drawings

Units: mm



Test Conditions and Performance

Parameter	Specification
TCR Test	25°C to 90°C. 1 ppm/°C on request.
Resistance Test Temp.	23±2°C
Load Life	2,000 h at rated power, ΔR ≤ 0.05%
Operating Temp.	-40°C to +125°C
Thermal Shock	ΔR≤0.01%, MIL-STD-202 Method 107
Voltage Coefficient	VCR < 0.05 ppm/V

Outline Dimensions (mm)

Model	A ±0.5	B ±0.5	C Max.	D ±0.5
UPR2	19.0	10.8	11.3	15.24
UPR2D	19.0	9.5	10.8	15.24
UPR3	38.0	14.0	14.5	34.30
UPR3D	38.0	12.7	14.0	34.30

UPR1 body (W × H × T): 7.7 × 9.1 × 2.6 mm.
Lead pitch: 5.08 mm. Lead length: 6.5 mm. Lead Ø: 0.6 mm.

UPR2/3: 3.8 mm thick, with 0.8 mm wide leads. UPR2D/3D: 3.8 mm thick, with 5.08 mm lateral lead spacing.
UPR2D connects in parallel for more stable mounting. UPR2 suits compact designs requiring low TCR and tight tolerance.

Ordering Example **UPR1 - 100M - 0.02% - 2 ppm/°C**