DUAL-IN-LINE HIGH-PRECISION RESISTOR NETWORK

UPRN-D

Product datasheet

Features

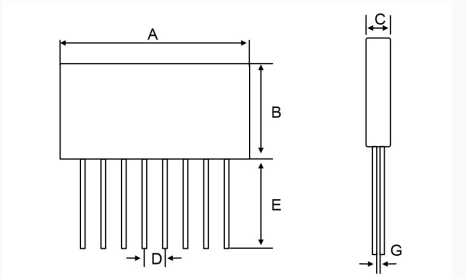
- High precision, low TCR, close resistance matching and good tracking.
- Stability of ±0.5% (70 °C, 1000 h). Temperature range: -55 to +155 °C.



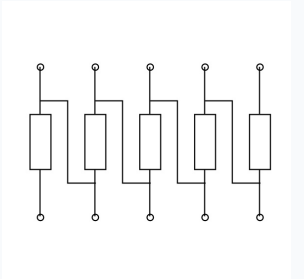
Applications

A/D and D/A converters, voltage dividers, shunts and filters in computers, industrial instruments and communications equipment.

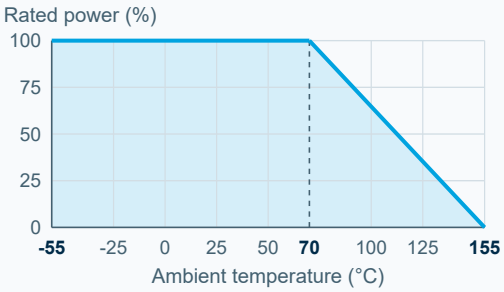
Outline drawing



Circuit example



Power derating



Dimensions

mm

A ± 0.2	B ± 0.5	C ± 0.5	D ± 0.3	E ± 0.5	d ± 0.05	G ± 0.05
10–50	9–12	6.5	2.54n	5–20	0.60	≥2.54

Main specifications

Resistance range	Relative TCR (ppm/K)
5 Ω to 10 Ω	2–10
10 Ω to 250 Ω	2–10
250 Ω to 500 kΩ	2–10
500 kΩ to 1 MΩ	2–10
1 MΩ to 2 MΩ	5–10
2 MΩ to 10 MΩ	10

Parameter	Specification
Tolerance	P ±0.02%, W ±0.05%, B ±0.1% C ±0.25%, D ±0.5%, F ±1.0%
Relative tolerance	L ±0.01%, P ±0.02% W ±0.05%, B ±0.1%
TCR (ppm/K)	±5, ±10, ±15, ±20, ±25, ±50
Rated power at 70 °C	0.125 W
Limiting element voltage	200 V

Inspection requirements and test conditions

Test	Requirement	Test conditions
Short-time overload	|ΔR| ≤ 0.10% R + 0.01 Ω	2.5 × rated voltage (max. 2 × limiting voltage), 5 s
Thermal shock	|ΔR| ≤ 0.10% R + 0.01 Ω	-55 to +155 °C, 5 cycles, 0.5 h
Dielectric strength	|ΔR| ≤ 0.10% R + 0.01 Ω	450 V, 1 min, 100 V/s
Resistance to soldering heat	|ΔR| ≤ 0.10% R + 0.01 Ω	260 °C, 10 s
Load life	|ΔR| ≤ 0.50% R + 0.05 Ω	70 °C, rated power Pe, 1000 h
Vibration	|ΔR| ≤ 0.10% R + 0.01 Ω	0–500 Hz, 0.75 mm, acceleration unit unconfirmed[1]

[1] The source specifies 98/s² for vibration acceleration and omits the length unit.

Ordering example and packaging

Model	Nominal resistance	Tolerance code	TCR code
UPRN-D	10 kΩ / 15 kΩ / 20 kΩ	W	C7

Resealable plastic bag and carton. Minimum order: 10 pieces. Custom dimensions available.

Reference standards listed in the source: GB/T 5729-2003, Q/BDS 007-2018