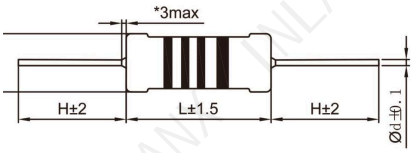
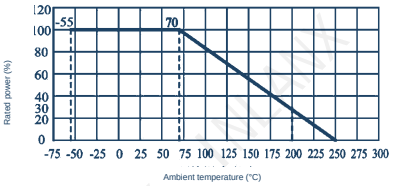
ARX21 Power Wirewound Resistor

Outline Drawing



Derating Curve





AEC-Q200 grade; detail specification Q/RU 635-2024; general specification AEC-Q200-2023.

Dimensions • mm

Source drawing also marks L±1.5, H±2, ΦD±0.8, Φd±0.1 and 3max.

Power W	L	ΦD	H	Φd
1	12.5	4.2	25	0.8
3	15.2	5.7	25	0.8
4	22.5	8.7	30	1.0
6	24.2	8.7	30	1.0
8	32.0	8.7	30	1.0
10	35.8	8.7	30	1.0
12	51.0	8.7	25	1.0

Electrical Specifications

Power W	Resistance Ω	Tolerance %	Temp. °C	TCR ×10□□/K
1	0.1–3k	±5	-55 to 250	R≥10Ω: ≤±250; R<10Ω: not assessed
3	0.1–4.3k	±5	-55 to 250	R≥10Ω: ≤±250; R<10Ω: not assessed
4	0.1–10k	±5	-55 to 250	R≥10Ω: ≤±250; R<10Ω: not assessed
6	0.15–12k	±5	-55 to 250	R≥10Ω: ≤±250; R<10Ω: not assessed
8	0.2–20k	±5	-55 to 250	R≥10Ω: ≤±250; R<10Ω: not assessed
10	0.2–22k	±5	-55 to 250	R≥10Ω: ≤±250; R<10Ω: not assessed
12	0.4–33k	±5	-55 to 250	R≥10Ω: ≤±250; R<10Ω: not assessed

Main Inspection Items

Above 180°C surface temperature, color bands may change. Flame-resistance ranges: 1W 175Ω–3kΩ; 3W 140Ω–4.3kΩ; 4W 115Ω–10kΩ; 6W 100Ω–12kΩ; 8W 80Ω–20kΩ; 10W 75Ω–22kΩ; 12W 60Ω–33kΩ.

Item	Method	Requirement
Solderability	245±5°C, immerse 5(+0/-0.5)s, ≤1.27mm from body	Tin coverage ≥95%, no concentrated nonwetting
Lead strength	Tension 20N for 5–10s; bend 90°, 10N, 3 times in same direction	No damage; ΔR≤±(1%R+0.1Ω)
Resistance to soldering heat	260±5°C, 10±1s, ≤1.27mm from body	No damage; ΔR≤±(1%R+0.1Ω)
Dielectric withstand	1–3W: 300VAC; 4–12W: 500VAC; 60±5s	No breakdown or flashover
Insulation resistance	100±15VDC, 60±5s	≥1000MΩ
Overload	V=√(10PR), 5s	No damage; ΔR≤±(3%R+0.1Ω)
High-temperature exposure	250°C storage for 1000h	No damage; ΔR≤±(5%R+0.1Ω)
Temperature shock	-55 to 155°C, 1000 cycles	No damage; ΔR≤±(3%R+0.1Ω)
Steady damp heat	85°C, 85%RH, 1000h, V=10%√(PR)	No damage; ΔR≤±(5%R+0.1Ω)
High-temperature life	70°C, V=√(PR), 1.5h on/0.5h off, 1000h	No damage; ΔR≤±(5%R+0.1Ω)
Shock	Half-sine, 100g, 6ms, velocity change 3.75m/s	No damage; ΔR≤±(1%R+0.1Ω)
High-frequency vibration	10–2000Hz, 5g, 20min; 12 cycles each X/Y/Z	No damage; ΔR≤±(1%R+0.1Ω)
Electrostatic discharge	Human-body model 4000V, once per polarity	No damage; ΔR≤±(3%R+0.1Ω)
Flammability	Vertical burning	V-0, afterflame <10s
Flame resistance	Apply 9–32VDC in 1V increments, hold each ≥1h	No flame >3s or explosion; no >350°C lasting ≥10s

Ordering Information

ARX21-1W-30Ω-J-T52

Model / power / resistance / tolerance J±5% / packaging. T+number: banded taping; L0+number: loose color-band lead length. ≤3W may be taped; ≥4W supplied loose.