The 1AK4 is a filament type, fully shielded, subminiature pentode designed for use in RF applications requiring economy of space, weight, and battery drain. The flexible terminal leads may be soldered or welded directly to the terminals of circuit components without the use of sockets. Standard subminiature sockets may be used by cutting the leads to a suitable length.

**MECHANICAL DATA**

**ENVELOPE:** T-2X3 Glass

**BASE:** None (0.016" tinmed flexible leads. Length: 1.5" min. Spacing: 0.048" center-to-center)

**TERMINAL CONNECTIONS:** (Red Dot is adjacent to lead 1)
- Lead 1 Plate
- Lead 2 Grid #2
- Lead 3 Filament, Negative; Shield; Grid #3
- Lead 4 Grid #1
- Lead 5 Filament, Positive; Grid #3

**MOUNTING POSITION:** Any

**ELECTRICAL DATA**

**DIRECT INTERELECTRODE CAPACITANCES:** (μf/ds.)
- Grid to Plate: (g1 to p) 0.015 max.
- Input: g1 to (f+ g2+ g3) 3.5
- Output: p to (f+ g2+ g3) 5.0

**DESIGN CENTER MAXIMUM RATINGs:**
- Filament Voltage (dc) 1.25 volts
- Plate Voltage 90 volts
- Grid #2 Voltage 90 volts
- Total Cathode Current 1.0 ma.

**CHARACTERISTICS AND TYPICAL OPERATION—CLASS A1 AMPLIFIER:**
- Filament Voltage (dc) 1.25
- Filament Current 20 ma.
- Plate Voltage 45
- Grid #2 Voltage 67.5 volts
- Grid #2 Supply Voltage 67.5 volts
- Grid #2 Resistor 0.11 meg.
- Grid #1 Voltage & Plate Resistance 0
- Transconductance 1.5
- Plate Current 750 μmhos
- Grid #2 Current 0.75 ma.
- Grid #1 Voltage (approx.) for Gm= 10 μmhos 0.2
- Grid #1 Voltage (approx.) for Gm= 10 μmhos -3
- Grid #1 Voltage (approx.) for Gm= 10 μmhos -3.5 volts

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* Bulb is entirely coated with a metallic shield connected to lead 3.
* Grid #3 is comprised of two separate deflector plates, one of which is connected to lead 3 and the other to lead 5.
* Grid resistor=5 meghms

Data

**INDUSTRIAL TUBE DIVISION**

55 CHAPEL ST., NEWTON 58, MASS.

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AVERAGE PLATE CHARACTERISTICS

Conditions:
Ef = 1.25 V
Ec2 = 45 V

Plate or Grid 2 Current - mA

Plate Voltage - Volts
SUBMINIATURE PENTODE

AVERAGE CHARACTERISTICS

Conditions:
- \( E_f = 1.25 \text{ V} \)
- \( E_b = 45 \text{ V} \)
- \( E_c2 = 45 \text{ V} \)

Transconductance - \( \mu \)hos

Plate or Grid \( I_2 \) Current - mA

Grid \#1 Voltage - Volts

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