



Excellence in Electronics

**TYPE
1AK4**

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" tinned 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 4 Grid #1 |
| Lead 2 Grid #2 | Lead 5 Filament, Positive; Grid #3 ♦ |
| Lead 3 Filament, Negative; Shield; Grid #3 ♦ | |

MOUNTING POSITION: Any

ELECTRICAL DATA

DIRECT INTERELECTRODE CAPACITANCES: (μ tds.)

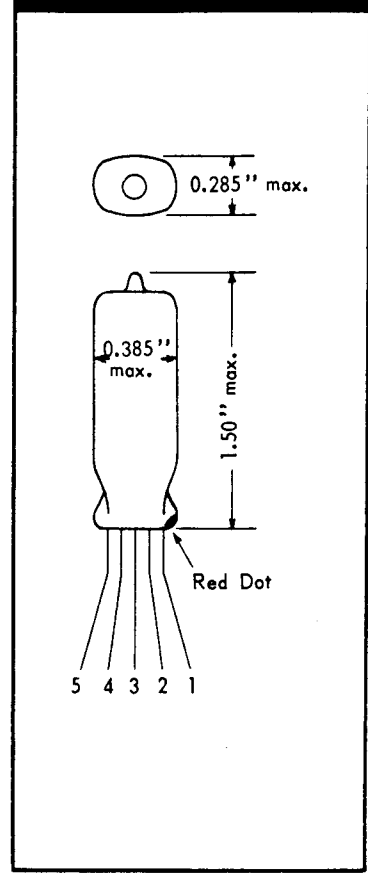
- | | |
|--------------------------|------------|
| Grid to Plate: (g1 to p) | 0.015 max. |
| Input: g1 to (f+ g2+ g3) | 3.5 |
| Output: p to (f+ g2+ g3) | 5.0 |

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 | 1.25 volts |
| Filament Current | 20 | 20 ma. |
| Plate Voltage | 45 | 67.5 volts |
| Grid #2 Voltage | 45 | volts |
| Grid #2 Supply Voltage | | 67.5 volts |
| Grid #2 Resistor | | 0.11 meg. |
| Grid #1 Voltage ▲ | 0 | 0 volts |
| Plate Resistance | 1.5 | 2.0 meg. |
| Transconductance | 750 | 750 μ hos |
| Plate Current | 0.75 | 0.75 ma. |
| Grid #2 Current | 0.2 | 0.2 ma. |
| Grid #1 Voltage (approx.) for Gm= 10 μ hos | -3 | -3.5 volts |



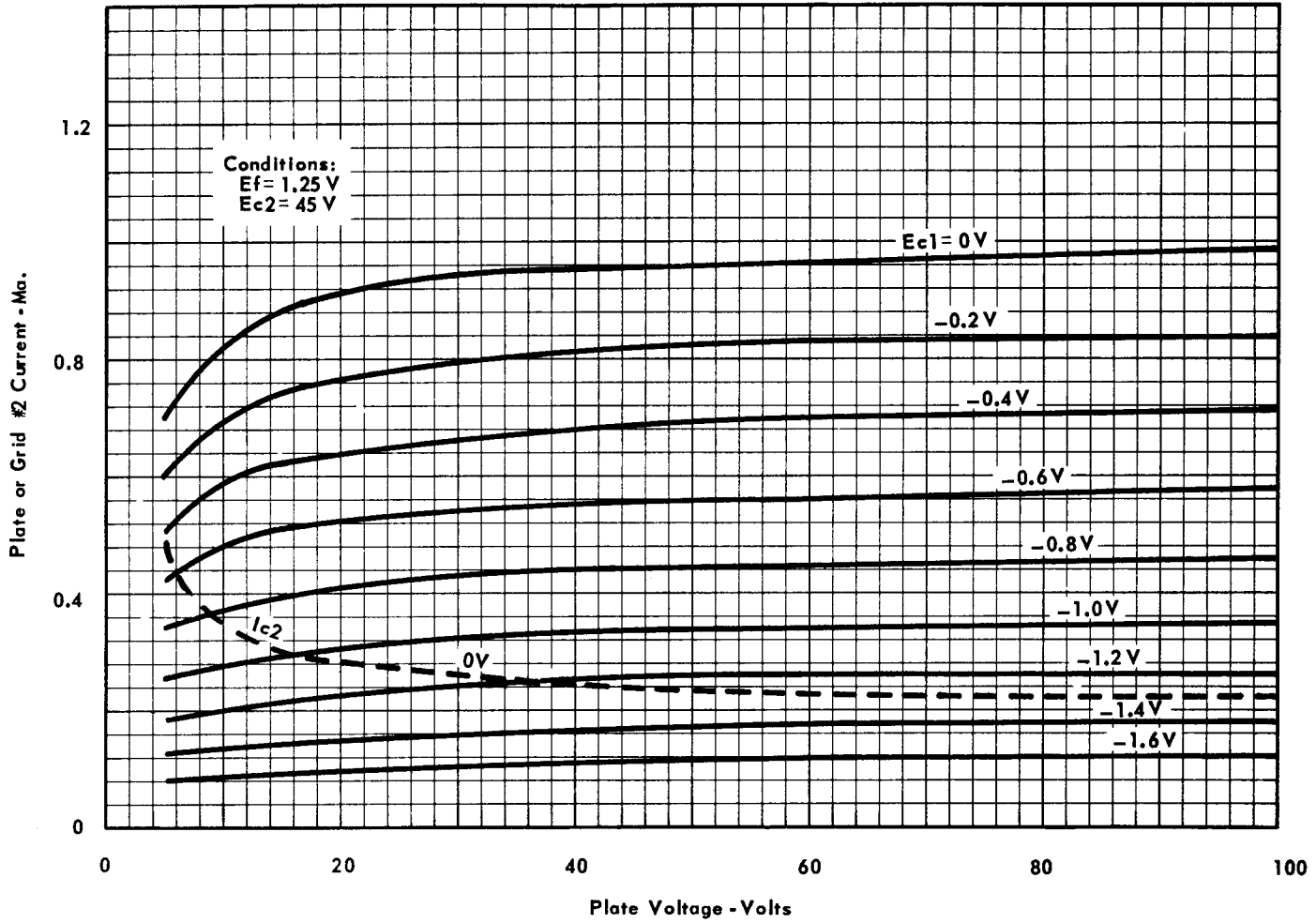
- Bulb is entirely coated with a metallic shield connected to lead 3.
- ♦ Grid #3 is comprised of two separate deflector plates, one of which is connected to lead 3 and the other to lead 5.
- ▲ Grid resistor=5 megohms

Data



SUBMINIATURE PENTODE

AVERAGE PLATE CHARACTERISTICS



INDUSTRIAL TUBE DIVISION

RAYTHEON MANUFACTURING COMPANY

55 CHAPEL ST., NEWTON 58, MASS.



SUBMINIATURE PENTODE

AVERAGE CHARACTERISTICS

