

ELECTRONIC TUBE REFERENCE

1AK4

Voltage - Pentode or Tetrode (under 100V) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Directly heated sharp-cutoff RF pentode for low-drain Class-A high-frequency amplification in portable equipment.

GENERAL CHARACTERISTICS

BASE DESIGNATION	1AK4	BASE PINS	–
NOMINAL HEATER	1.25 V / 20 mA	PARALLEL HEATER	– / –
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	1500000 Ω
TRANSCONDUCTANCE	0.00075 S
MAXIMUM PLATE VOLTAGE	90 V
MAXIMUM SCREEN VOLTAGE	90 V
Promoted from the printed condensed-manual maximum/characteristic columns; operating-point values are retained in TUBE_SECTION_PARAMETER.	

Directly heated sharp-cutoff RF pentode for low-voltage Class-A radio-frequency amplification.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1938 Raytheon

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1938 RAYTHEON

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid #	2 volts	Grid #2 Volitage volts

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament Yoltage (dc)	1.25 volts	Filament Yoltage (dc) 1.25 1.25 volts
Filament Current	20 ma	Filament Current 20 20 ma.
Plate Voltage	6715 volts	Plate Voltage 45 6715 volts
Grid #	45 volts	Grid #2 Yoltage 45 volts
Grid #	67.5 volts	Grid #2 Supply Voltage 67.5 volts
Grid #	0.1 meg	Grid #2 Resistor 0.1 meg.
Grid #] VoltageA	0 volts	Grid #] VoltageA 0 0 volts
Plate Resistance	2 meg	Plate Resistance 15 2.0 meg.
Transconductance	750 pmhos	Transconductance 750 750 pmhos
Plate Current	0.75 ma	Plate Current 0.75 0.75 ma.
Grid #	0.2 ma	Grid #2 Current 0.2 0.2 ma.
Grid #] Yoltage {approx.) for Gm=	35 umhos	Grid #] Yoltage {approx.) for Gm=10 umhos -3 =35 volts
Plate or Grid #	2 Ma	Plate or Grid #2 Current - Ma.



195X General Electric Essential Characteristics

Published test conditions and operating points. Values on this page are preserved as reported by this source.

195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

Section 1 · Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	3.5 pF	Section1
Output capacitance	4.5 pF	Section1
Grid-to-plate capacitance	0.01 pF	Section1

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	45 V	ClassA
Screen voltage	45 V	ClassA
Plate current	0.75 mA	ClassA
Screen current	0.2 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	1500000 Ω	ClassA
Transconductance	750 μS	ClassA

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes, and their source documents.

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