

ELECTRONIC TUBE REFERENCE

1AJ4

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

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Directly heated remote-cutoff RF pentode with a 1.4 V, 25 mA filament. Designed for Class A high-frequency amplification, it combines low filament drain with variable-gain capability for portable battery receivers.

GENERAL CHARACTERISTICS

BASE DESIGNATION	6AR	BASE PINS	7
NOMINAL HEATER	1.4 V / 25 mA	PARALLEL HEATER	– / –
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

6AR - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – G3	A	G3 – Suppressor Grid	CONNECTED
PIN1 – IS	A	IS – Internal Screen	CONNECTED
PIN1 – F	–	F – Filament	CONNECTED
PIN2 – P	A	P – Plate (Anode)	CONNECTED
PIN3 – G2	A	G2 – Screen Grid	CONNECTED
PIN4 – IC	–	–	IC
PIN5 – G3	A	G3 – Suppressor Grid	CONNECTED
PIN5 – IS	A	IS – Internal Screen	CONNECTED
PIN5 – F	–	F – Filament	CONNECTED
PIN6 – G1	A	G1 – Control Grid	CONNECTED
PIN7 – F	–	F – Filament	CONNECTED

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	1000000 Ω
TRANSCONDUCTANCE	0.00075 S
MAXIMUM PLATE VOLTAGE	90 V
MAXIMUM SCREEN VOLTAGE	90 V
MAXIMUM PLATE DISSIPATION	0.25 W
MAXIMUM SCREEN DISSIPATION	0.1 W
MAXIMUM CATHODE CURRENT	2.2 mA
<i>Promoted from the printed condensed-manual maximum/characteristic columns; operating-point values are retained in TUBE_SECTION_PARAMETER.</i>	

Directly heated remote-cutoff RF pentode with a 1.4 V, 25 mA filament for Class-A radio-frequency amplification.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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	3.3 pF	Section1
Output capacitance	7.8 pF	Section1
Grid-to-plate capacitance	0.01 pF	Section1

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	64 V	ClassA
Screen voltage	64 V	ClassA
Control-grid voltage	0 V	ClassA
Plate current	1.65 mA	ClassA
Screen current	0.55 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	1000000 Ω	ClassA
Transconductance	750 μS	ClassA

1961 Ferranti Technical Handbook

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

1961 FERRANTI TECHNICAL HANDBOOK

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltage	1.4 V	—
HeaterOrFilamentCurrent	25 mA	—
CutoffCharacteristic	Variable μ	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

1999 Philips 0-D

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

1999 PHILIPS 0-D

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament voltage	1.4 V	Filament voltage 1.4 volts
Filament current	25 mA	Filament current 25 m amps
except plate	343 pF	except plate 343 uuF
Battery voltage	90 V	Battery voltage 90 volts™)
Plate voltage	90 V	Plate voltage 90 volts
Plate dissipation	0.25 watt	Plate dissipation 0.25 watt
Grid No	2 V	Grid No.2 voltage 90 volts
Grid No	90 V	Grid No.2 voltage 90 volts
Grid Ko.2 dissipation	0.1 watt	Grid Ko.2 dissipation 0.1 watt
Cathode current	2.2 mA	Cathode current 2.2 m amps
Grid No	1 c	Grid No.1 circuit resistance 3 megohms

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No	3 megohms	Grid No.1 circuit resistance 3 megohms
Grid No	1 V	Grid No.1 voltage when grid
No	1 c	No.1 current = + 0.3 pamp -0.2 volt
No	0.3 pa	No.1 current = + 0.3 pamp -0.2 volt
No	-0.2 V	No.1 current = + 0.3 pamp -0.2 volt
Grid No.1 bias 0 5.5 70 –	4.17 V	Grid No.1 bias 0 5.5 70 —4.17 volts
Grid No	64 V	Grid No.2 voltage 64 85 64 64 volts
Grid No	2 c	Grid No.2 current 0.55 - 0.55 - m amp
Transconductance 750 10 750	10 µS	Transconductance 750 10 750 10 micromhos
Plate resistance 0.7 >5 1.0 >	5 megohms	Plate resistance 0.7 >5 1.0 >5 megohms
voltage is	110 V	voltage is 110 volts
+) Based on a supply voltage of 90 or	67.5 V	+) Based on a supply voltage of 90 or 67.5 volts re-
Plate voltage=64	-85 V	- Plate voltage=64-85volts : o
Plate voltage	85 V	- Plate voltage=85volts C .4 ARk ®
Plate voltage	4 A	- Plate voltage=85volts C .4 ARk ®
Battery voltage	85 V	- Battery voltage=85volts y.avi 47 y. 5
5 Plate voltage	64 V	5 Plate voltage=64volts 1117 =
Grid3 No2 voltage=—	64 V	- Grid3 No2 voltage=—64volts~ F Ry,
Plate voltage	64 v	= Plate voltage=64volfs 4 8
1 Grid No2 voltage=6’	4 v	1 Grid No2 voltage=6’4votts\ /i =
Plate voltage	64 V	Plate voltage =64volts
Grid No2 voltage	84 V	Grid No2 voltage 84volts
Battery voltage &	5 V	Battery voltage &5volts

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate to grid No	1 mA	Plate to grid No.1 max. Q.01 puF

TUBE TINKER

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

