

ELECTRONIC TUBE REFERENCE

6BY7

Voltage - Pentode Remote Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

High-slope variable-mu pentode designed for gain-controlled RF amplification in FM and AM receiver front ends.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9AQ	BASE PINS	9
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

9AQ - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – K	A	K – Cathode	CONNECTED
PIN2 – G1	A	G1 – Control Grid	CONNECTED
PIN3 – K	A	K – Cathode	CONNECTED
PIN4 – H	–	H – Heater	CONNECTED
PIN5 – H	–	H – Heater	CONNECTED
PIN6 – IS	A	IS – Internal Screen	CONNECTED
PIN7 – P	A	P – Plate (Anode)	CONNECTED
PIN8 – G2	A	G2 – Screen Grid	CONNECTED
PIN9 – G3	A	G3 – Suppressor Grid	CONNECTED

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	500000 Ω
TRANSCONDUCTANCE	0.006 S
AMPLIFICATION FACTOR	15
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	2.5 W
MAXIMUM SCREEN DISSIPATION	0.65 W
MAXIMUM CATHODE CURRENT	15 mA
<i>Published maximum ratings, operating characteristics, rectifier data, and capacitances reviewed.</i>	

High-slope variable-mu RF pentode for FM/AM receivers.

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	250 V	Published handbook rating
Maximum screen voltage	250 V	Published handbook rating
Plate voltage	250 V	ClassA
Screen voltage	100 V	ClassA
Control-grid bias	2 V	ClassA
Plate current	10 mA	ClassA
Screen current	2.5 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	500000 ohm	Published handbook characteristic
Transconductance	6000 μ S	Published handbook characteristic
Heater voltage	6.3 V	Published heater rating
Heater current	300 mA	Published heater rating

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	7.2 pF	Published capacitance column
Output capacitance	3.7 pF	Published capacitance column
Grid-to-plate capacitance	0.007 pF	Published capacitance column

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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	Point1
Screen-grid voltage	85 V	Point1
Control-grid voltage	-1.8 V	Point1
Plate current	8 mA	Point1
Screen-grid current	2 mA	Point1
Transconductance	5700 uS	Point1
Plate resistance	500000 Ohm	Point1
Screen-to-control-grid amplification factor	15 ratio	Point1
Control-grid voltage for 100-to-1 gm reduction	-30 V	Point1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	7.5 pF	—
Output capacitance	3.7 pF	—
Grid-to-plate capacitance maximum	0.007 pF	—



TUBE TINKER
ELECTRON TUBE DATABASE

SOURCE DATA APPENDIX

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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	300 mA	—
Plate voltage	250 V	—
Screen voltage	100 V	—
Plate current	10 mA	—
Screen current	2.5 mA	—
Transconductance	6000 uS	—
Plate resistance	500000 ohm	—
Controlled transconductance	60 uS	RemoteCutoffPoint
Equivalent noise resistance	1500 ohm	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	7.2 pF	—
Output capacitance	3.7 pF	—
Plate-grid capacitance maximum	0.007 pF	—

TUBE TINKER

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

[Catalog](#)[Tube types](#)[Full books](#)[Blog](#)[Feedback & corrections](#)

© 2026 Tube Tinker