

ELECTRONIC TUBE REFERENCE

6AU6A

Voltage Pentode - Sharp Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

PENTODE

Sharp-cutoff 6AU6-family pentode for fixed-gain RF and IF voltage amplification.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7BK	BASE PINS	7
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

7BK - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	1000000 Ω
TRANSCONDUCTANCE	0.0052 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	150 V
MAXIMUM PLATE DISSIPATION	3.5 W
MAXIMUM SCREEN DISSIPATION	0.75 W
MAXIMUM CATHODE CURRENT	25 mA
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
<i>Promoted from published ratings/characteristics; identical repeated sections compressed where applicable.</i>	

Sharp-cutoff pentode explicitly identified by the 7543 source as electrically identical except for the 7543 controlled-hum characteristic.

SOURCE OPERATING CONDITIONS

1965 Sylvania Electronic Tubes Vol3

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

1965 SYLVANIA ELECTRONIC TUBES VOL3

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	PentodeConnection
Screen-grid voltage	125 V	PentodeConnection
Cathode resistor	100 Ohm	PentodeConnection
Transconductance	4500 uS	PentodeConnection
Plate resistance	1500000 Ohm	PentodeConnection
Plate current	7.6 mA	PentodeConnection
Screen-grid current	3 mA	PentodeConnection
Triode-connected plate voltage	250 V	TriodeConnection
Triode-connected amplification factor	36 ratio	TriodeConnection
Triode-connected plate resistance	7500 Ohm	TriodeConnection

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.0035 pF	PentodeConnection
Input capacitance	5.5 pF	PentodeConnection
Output capacitance	5 pF	PentodeConnection

1965 Westinghouse Data Book

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

1965 WESTINGHOUSE DATA BOOK
Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltage	6.3 V	—
HeaterOrFilamentCurrent	300 mA	—
ControlledWarmupHeater	1 boolean	—
Heater Warmup Time	11 s	—
Plate Voltage	250 V	—
Screen Voltage	150 V	—
Grid Voltage	-2 V	—
Plate Current	10.5 mA	—
Screen Current	4.2 mA	—
Transconductance	5200 uS	—
Plate Resistance	500000 ohm	—
GridToPlateCapacitanceMaximum	0.0035 pF	—
Input Capacitance	5.5 pF	—
Output Capacitance	5 pF	—
TriodeConnectedAmplificationFactor	36	—
TriodeConnectedPlateResistance	7500 ohm	TriodeConnection



SOURCE DATA APPENDIX

1966 Tung Sol Electronic Tubes 1 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 1 OF 4

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published table
Heater current	300 mA	Published table
Plate resistance	1000000 ohm	Published table
Transconductance	5200 μS	Published table
Amplification factor	36	Published table
Heater warm-up time	11 s	Published table

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	RF Amplifier
Screen voltage	150 V	RF Amplifier
Plate current	10.6 mA	RF Amplifier
Screen current	4.3 mA	RF Amplifier



SOURCE DATA APPENDIX

1971 RCA HB3 Binder 3 of 7

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

1971 RCA HB3 BINDER 3 OF 7

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	300 mA	—
Plate voltage	250 V	ClassA
Screen voltage	150 V	ClassA
Grid voltage	-2 V	ClassA
Plate current	10.5 mA	ClassA
Screen current	3.5 mA	ClassA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater warm-up time	11 s	ControlledWarmup

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	5200 μ S	ClassA
Plate resistance	500000 ohm	ClassA

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.0035 pF	WithShield