

ELECTRONIC TUBE REFERENCE

6HJ8

Voltage Pentode or Tetrode (with diode) electronic tube

CONSOLIDATED TECHNICAL DATA
2 SECTIONS
CONSTRUCTION
DIODE-PENTODE

Television diode-pentode combining a video-detector diode with a high-transconductance sharp-cutoff pentode for IF amplification, integrating picture-signal detection and wideband IF gain.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9CY	BASE PINS	9
NOMINAL HEATER	6.3 V / 450 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

9CY - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – 1K	A	K – Cathode	CONNECTED
PIN2 – 1G1	A	G1 – Control Grid	CONNECTED
PIN3 – 1G2	A	G2 – Screen Grid	CONNECTED
PIN4 – H	–	H – Heater	CONNECTED
PIN5 – H	–	H – Heater	CONNECTED
PIN6 – 1P	A	P – Plate (Anode)	CONNECTED
PIN7 – 2K	B	K – Cathode	CONNECTED
PIN8 – 2P	B	P – Plate (Anode)	CONNECTED
PIN9 – 1G3	A	G3 – Suppressor Grid	CONNECTED

SECTION RATINGS

SECTION1 Diode

No fixed ratings recorded.

Published maximum ratings and characteristic values promoted where applicable; additional table values retained in TUBE_SECTION_PARAMETER.

SECTION2 Pentode

PLATE RESISTANCE	200000 Ω
TRANSCONDUCTANCE	0.0093 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	3.2 W
MAXIMUM SCREEN DISSIPATION	0.55 W

Published maximum ratings and characteristic values promoted where applicable; additional table values retained in TUBE_SECTION_PARAMETER.

The 6HJ8 combines a video-detector diode with a sharp-cutoff pentode designed for IF amplifier service in television receivers; the two sections have separate cathodes.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1950 Sylvania

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

1950 SYLVANIA

Section 1 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PlateVoltageTypical	330 V	Published operating/characteristic value
PlateCurrentTypical	11.5 mA	Published operating/characteristic value



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1961 Tung Sol

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

1961 TUNG SOL

Section 1 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	330 V	Published operating/characteristic table
Screen Voltage	2 V	Published operating/characteristic table
Grid Voltage	1 V	Published operating/characteristic table
Cathode Resistor	56 ohm	Published operating/characteristic table

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	11.5 mA	Published operating/characteristic table
Screen Current	3.6 mA	Published operating/characteristic table
Transconductance	9300 μ S	Published operating/characteristic table
Plate Resistance	0.2 ohm	Published operating/characteristic table

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	330 V	Published operating/characteristic table
Screen Voltage	2 V	Published operating/characteristic table
Grid Voltage	1 V	Published operating/characteristic table
Cathode Resistor	56 ohm	Published operating/characteristic table

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	11.5 mA	Published operating/characteristic table
Screen Current	3.6 mA	Published operating/characteristic table
Transconductance	9300 uS	Published operating/characteristic table
Plate Resistance	0.2 ohm	Published operating/characteristic table



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

1966 Tung Sol Electronic Tubes 2 of 4

SOURCE PDF

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

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate to cathode and heater capacitance	2.4 pF	—
Cathode to plate and heater capacitance	3 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum DC plate current	5 mA	VideoDetectorDiode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid 1 to plate capacitance	0.015 pF	—
Input capacitance	7 pF	—
Output capacitance	3.2 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	125 V	ClassA1
Screen voltage	125 V	ClassA1
Cathode resistor	56 ohm	ClassA1
Plate current	11.5 mA	ClassA1
Screen current	3.6 mA	ClassA1

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid 1 cutoff voltage	-6 V	I _b =20uA



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

1971 RCA HB3 Binder 5 of 7

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

1971 RCA HB3 BINDER 5 OF 7

Section 1 · Diode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC) – published value 1	6.3 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Voltage (AC or DC) – published value 2	6.3 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC) – published value 3	0.6 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Current – published value 1	450 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Current – published value 2	30 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Current – published value 3	450 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Plate to cathode and heater	2.4	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Cathode to plate and heater	3	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
and heater	7	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
and heater	3.2	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Plate Supply Voltage	125 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid No 3	3	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid-No.2 Supply Voltage	125 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Cathode Resistor	56 ohm	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Plate Resistance (Approx.)	0.2 Mohm	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Transconductance	9300	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	11.5 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid-No.2 Current	3.6 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
plate μ a = 20 – published value 1	20 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
plate μ a = 20 – published value 2	-6 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
plate ma. = 2, and cathode	2 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Pin 4 -Heater	4	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Pin 5 -Heater	5	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
For grid-No.2 voltages between 165	165 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
and 330 volts	330 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Plate Current for plate volts – published value 1	10 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Plate Current for plate volts – published value 2	50 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
D AL heater volts = 6.9	6.9 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
respect to cathode	200 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
respect to cathode	200 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid No.1 to plate	0.015 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
PLATE VOLTAGE	330 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE	330 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Positive-bias value	0 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
For grid-No.2 voltages up to 165 volts – published value 1	165 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
For grid-No.2 voltages up to 165 volts – published value 2	0.55 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
PLATE DISSIPATION – published value 1	3 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
PLATE DISSIPATION – published value 2	2 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
For fixed-bias operation	0.25 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
For cathode-bias operation	1 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
DC PLATE CURRENT	5 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.

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Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	125 V	ClassA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	330 V	—
Maximum screen-grid voltage	330 V	—
Diode plate to pentode grid No.1	0.005 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Diode cathode to pentode plate – published value 1	0 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Diode cathode to pentode plate – published value 2	15 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Diode plate to pentode plate	0.035 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pin 6 -Pentode Plate	6	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.