

ELECTRONIC TUBE REFERENCE

6BZ6

Voltage - Pentode Remote Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
PENTODE

Semi-remote-cutoff high-transconductance pentode for gain-controlled television video-IF amplification and automatic gain control.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7CM	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

7CM - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – G1	A	G1 – Control Grid	CONNECTED
PIN2 – K	A	K – Cathode	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 – G3	A	G3 – Suppressor Grid	CONNECTED
PIN7 – IS	A	IS – Internal Screen	CONNECTED

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	260000 Ω
TRANSCONDUCTANCE	0.008 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	2.3 W
MAXIMUM SCREEN DISSIPATION	0.55 W
<i>Published promoted values applied where applicable; additional table data retained as parameters.</i>	

Semiremote-cutoff pentode used in gain-controlled television video-IF amplifier stages.

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	300 V	Published handbook rating
Maximum screen voltage	150 V	Published handbook rating
Plate voltage	200 V	ClassA
Screen voltage	150 V	ClassA
Plate current	11 mA	ClassA
Screen current	2.6 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	600000 ohm	Published handbook characteristic
Transconductance	6100 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	7.5 pF	Published capacitance column
Output capacitance	2.8 pF	Published capacitance column
Grid-to-plate capacitance	0.015 pF	Published capacitance column

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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen Voltage	2 V	Published operating/characteristic table



SOURCE DATA APPENDIX

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	125 V	—
Screen-grid voltage	125 V	—
Cathode bias resistor	56 0hm	—
Plate current	14 mA	—
Screen-grid current	3.6 mA	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	260000 0hm	—
Transconductance	8000 uS	—
Control-grid cutoff voltage	-19 V	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.015 pF	Shielded

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	7 pF	Shielded
Output capacitance	3 pF	Shielded



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	300 mA	—
Transconductance	9000 μ S	RepresentativePublishedPoint
Plate Resistance	260000 ohm	RepresentativePublishedPoint

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	300 V	—
Maximum Plate Dissipation	2 W	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
AMPLIFIER IN	300 mA	AMPLIFIER IN 300 MA. SERIES HEATER OPERATED TELEVISION RECEIVERS.
HEATER CURRENT 0	3 A	ClassA HEATER CURRENT 0.3 AMP.
PLATE VOLTAGE	125 V	ClassA PLATE VOLTAGE 125 VOLTS
GRID #	125 V	ClassA GRID #2 VOLTAGE 125 VOLTS
CATHODE BIAS RESISTOR	56 ohm	ClassA CATHODE BIAS RESISTOR 56 OHMS
PLATE RESISTANCE (APPROX.)	0.26 Mohm	ClassA PLATE RESISTANCE (APPROX.) 0.26 MEGOHM
PLATE CURRENT Z	4 mA	ClassA PLATE CURRENT Z4 MA.
GRID #	3.6 mA	ClassA GRID #2 CURRENT 3.6 MA.
GRID #	50 uS	ClassA GRID #1 VOLTAGE (APPROX.) FOR Gm = 50 uMHOS —Z9 VOLTS
GRID #	9 V	ClassA GRID #1 VOLTAGE (APPROX.) FOR Gm = 50 uMHOS —Z9 VOLTS
Transconductance	8000 uS	ClassA
Plate resistance	0.26 Mohm	ClassA
Grid voltage at gm=50 uS	-29 V	—
Cutoff-region transconductance	700 uS	GridVoltage=-4.5V

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GRID TO PLATE: G	25 µµf	Capacitances GRID TO PLATE: G1 TO P (MA%). .015 .025 µµf

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	125 V	ClassA
Screen-grid voltage	125 V	ClassA
Cathode bias resistor	56 ohm	ClassA
Plate current	24 mA	ClassA
Screen-grid current	3.6 mA	ClassA

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1971 RCA HB3 Binder 4 of 7

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

1971 RCA HB3 BINDER 4 OF 7

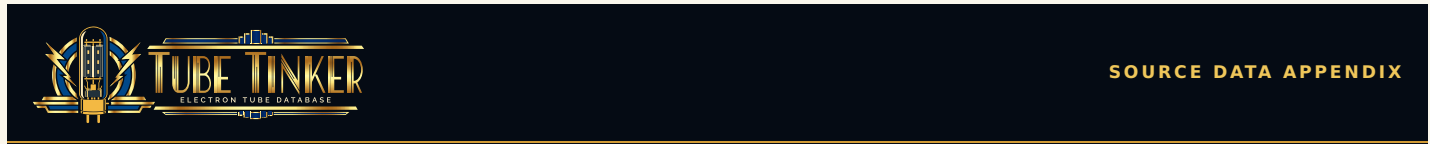
Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC) – published value 1	6.3 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Voltage (AC or DC) – published value 2	10 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Current	0.3	Published datasheet value; multiple values represent separate source-table limits or conditions.
grid No.3 6 internal shield, 6		Published datasheet value; multiple values represent separate source-table limits or conditions.
grid No.2, and heater – published value 1	7	Published datasheet value; multiple values represent separate source-table limits or conditions.
grid No.2, and heater – published value 2	7	Published datasheet value; multiple values represent separate source-table limits or conditions.
and heater – published value 2 1		Published datasheet value; multiple values represent separate source-table limits or conditions.
and heater – published value 3 2		Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Supply Voltage	125 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid-No.2 Supply Voltage	125 V	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance (Approx) – published value 1	0 ohm	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Resistance (Approx) – published value 2	26 ohm	Published datasheet value; multiple values represent separate source-table limits or conditions.
Transconductance	8000	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Current	14 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid-No.2 Current	3.6 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 1 -Grid No.1 – published value 1	1	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 1 -Grid No.1 – published value 2	6	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 2 -Cathode – published value 1	2	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 2 -Cathode – published value 2	7	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 3 -Heater	3	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 4 -Heater	4	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 5 -Plate	5	Published datasheet value; multiple values represent separate source-table limits or conditions.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to plate – published value 1	0.025 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to plate – published value 2	0.015 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
PLATE VOLTAGE	330 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
GRID-No.3 (SUPPRESSOR-GRID) VOLTAGE	0 V	Published datasheet value; multiple values represent separate source-table limits or conditions.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1975 RCA RC30

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

1975 RCA RC30

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Plate Current	180 mA	Published in approved 12BZ6 target entry; Section1
Heater Voltage (ac/dc) 3.15 4.2 6.3	12.6 V	Published in approved 12BZ6 target entry; Section1
Heater Current 0.6 0.45 0.3	150 mA	Published in approved 12BZ6 target entry; Section1
age)	11 seconds	Published in approved 12BZ6 target entry; Section1
Plate Voltage	330 V	Published in approved 12BZ6 target entry; Section1
Grid No.3 (Suppressor-Grid) Voltage, Positive value	0 V	Published in approved 12BZ6 target entry; Section1
Grid-No.2 (Screen-Grid) Supply Voltage	330 V	Published in approved 12BZ6 target entry; Section1
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0 V	Published in approved 12BZ6 target entry; Section1
Plate Dissipation	2.3 W	Published in approved 12BZ6 target entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For grid-No. 2 voltages up to	165 V	Published in approved 12BZ6 target entry; Section1
For grid-No. 2 voltages up to 165 volts	0.55 W	Published in approved 12BZ6 target entry; Section1
For grid-No.2 voltages between 165 and	330 V	Published in approved 12BZ6 target entry; Section1
For fixed-bias operation	0.25 MΩ	Published in approved 12BZ6 target entry; Section1
For cathode-bias operation	1 MΩ	Published in approved 12BZ6 target entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Supply Voltage	125 V	Published in approved 12BZ6 target entry; Section1
Grid-No.2 Supply Voltage	125 V	Published in approved 12BZ6 target entry; Section1
Cathode-Bias Resistor	56 Ω	Published in approved 12BZ6 target entry; Section1
Plate Resistance (Approx.)	0.26 MΩ	Published in approved 12BZ6 target entry; Section1
Grid-No.1 Voltage (Approx.) for transconductance of	50 μS	Published in approved 12BZ6 target entry; Section1
Grid-No.1 Voltage (Approx.) for transconductance of 50 /imhos	-3.6 V	Published in approved 12BZ6 target entry; Section1
Grid-No.1 Voltage (Approx.) for transconductance of	700 μS	Published in approved 12BZ6 target entry; Section1
Heater Voltage (ac/dc)	6.3 V	Published in approved 12BZ6 target entry; Section1
Heater Current	150 mA	Published in approved 12BZ6 target entry; Section1

TUBE TINKER

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

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

