



ELECTRONIC TUBE REFERENCE

3BZ6

Voltage - Pentode Remote Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Semi-remote-cutoff pentode designed for gain-controlled television video-IF amplifier stages. Its transfer characteristic permits effective AGC while maintaining the bandwidth required for television intermediate-frequency signals.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7CM	BASE PINS	7
NOMINAL HEATER	3.15 V / 600 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	600000 Ω
TRANSCONDUCTANCE	0.0061 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	150 V
MAXIMUM PLATE DISSIPATION	2.5 W
MAXIMUM SCREEN DISSIPATION	0.5 W
MAXIMUM CATHODE CURRENT	15 mA
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
WARM-UP TIME	11 s
<i>Published ratings/characteristics promoted where semantically applicable; supplemental values retained in parameter table.</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
Plate voltage	200 V	ClassA
Screen-grid voltage	150 V	ClassA
Grid No.1 bias	Rk=180 V	ClassA
Plate current	11 mA	ClassA
Screen-grid current	2.6 mA	ClassA
Plate resistance	600000 ohm	ClassA
Transconductance	6100 uS	ClassA



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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	200 V	ClassA1
Screen Voltage	150 V	ClassA1

Characteristic		
Parameter	Published Value	Condition / Note
Plate Current	11 mA	ClassA1



SOURCE DATA APPENDIX

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

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
Input capacitance	7 pF	Shielded
Output capacitance	3 pF	Shielded



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

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	3.15 V	Published heater rating
Heater current	600 mA	Published heater rating

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	330 V	Published limit
Maximum screen voltage	250 V	Published limit
Maximum plate dissipation	1.8 W	Published limit
Maximum screen dissipation	0.7 W	Published limit
Maximum cathode current	15 mA	Published limit



SOURCE DATA APPENDIX

1971 RCA HB3 Binder 4 of 7

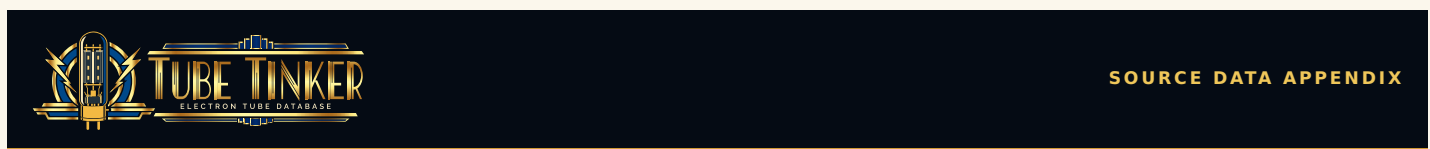
Published test conditions and operating points. Values on this page are preserved as reported by this source.

1971 RCA HB3 BINDER 4 OF 7

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Current – published value 1	0	Published datasheet value; multiple numbers on a row represent separate source limits or conditions.
Current – published value 2	600	Published datasheet value; multiple numbers on a row represent separate source limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Current – published value 3	0.04	Published datasheet value; multiple numbers on a row represent separate source limits or conditions.
Voltage (ac or dc) at 0.600 A – published value 1	0 V	Published datasheet value; multiple numbers on a row represent separate source limits or conditions.
Voltage (ac or dc) at 0.600 A – published value 2	0.6 V	Published datasheet value; multiple numbers on a row represent separate source limits or conditions.
Voltage (ac or dc) at 0.600 A – published value 3	3.15 V	Published datasheet value; multiple numbers on a row represent separate source limits or conditions.
Warm-up Time (Average)	11	Published datasheet value; multiple numbers on a row represent separate source limits or conditions.
Heater~athode Voltage – published value 1	0 V	Published datasheet value; multiple numbers on a row represent separate source limits or conditions.
Heater~athode Voltage – published value 2	0 V	Published datasheet value; multiple numbers on a row represent separate source limits or conditions.
Current – published value 1	0.6	Published datasheet value; multiple numbers on a row represent separate source limits or conditions.
Current – published value 2	0.04	Published datasheet value; multiple numbers on a row represent separate source 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

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
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
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

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
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

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and their source documents.

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