

ELECTRONIC TUBE REFERENCE

6CL6

Voltage - Pentode Sharp Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
PENTODE

Power pentode used for wideband video amplification and other amplifier service; despite a conflicting stored description, its construction is not a damper diode.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9BV	BASE PINS	9
NOMINAL HEATER	6.3 V / 650 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

9BV - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	150000 Ω
TRANSCONDUCTANCE	0.011 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	7.5 W
MAXIMUM SCREEN DISSIPATION	1.7 W
MAXIMUM CATHODE CURRENT	75 mA
MAXIMUM HEATER-CATHODE VOLTAGE	100 V
<i>Power pentode</i>	

Novar type used as a damper tube in horizontal-de- flection circuits of color and black-and-white television receivers.



SOURCE OPERATING CONDITIONS

1950 Sylvania

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

1950 SYLVANIA

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	150000 ohm	—
Transconductance	11000 μ S	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	330 V	—
Maximum Screen Voltage	330 V	—
Maximum Plate Dissipation	8.5 W	—
Maximum Screen Dissipation	2 W	—
Plate Voltage	250 V	—
Screen Voltage	150 V	—
Plate Current	30 mA	—
Maximum Signal Power Output	2.8 W	—



SOURCE OPERATING CONDITIONS

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1958 Compagnie General

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

1958 COMPAGNIE GENERAL

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	650 mA	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA
Screen-grid voltage	150 V	ClassA
Grid voltage	-3 V	ClassA
Plate current	30 mA	ClassA
Screen-grid current	7 mA	ClassA
Load resistance	7500 ohm	ClassA
Power output	2.8 W	ClassA

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	1 pF	—
Output capacitance	5.5 pF	—
Grid-to-plate capacitance	0.12 pF	—



SOURCE DATA APPENDIX

1960 RCA Industrial and Communications Types

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

1960 RCA INDUSTRIAL AND COMMUNICATIONS TYPES

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—



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 maximum	330 V	—
Screen supply voltage maximum	350 V	—
Plate dissipation maximum	8.5 W	—
Screen input/dissipation maximum	2 W	—
Typical plate voltage	250 V	ClassA
Typical screen voltage	150 V	ClassA
Typical grid bias	-3 V	ClassA
Peak AF grid signal	3 V	ClassA
Zero-signal plate current	30 mA	ClassA
Maximum-signal plate current	31 mA	ClassA
Zero-signal screen current	7 mA	ClassA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum-signal screen current	7.2 mA	ClassA
Load resistance	7500 ohm	ClassA
Maximum signal power output	2.8 W	ClassA

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	11000 uS	—
Plate resistance	0.15 Mohm	—



SOURCE OPERATING CONDITIONS

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1966 Tung Sol Electronic Tubes 2 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 2 OF 4

Section 1 · Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.12 pF	—
Input capacitance	11 pF	—
Output capacitance	5.5 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA
Grid #2 voltage	150 V	ClassA
Grid #1 voltage	-3 V	ClassA
Zero-signal plate current	30 mA	ClassA
Zero-signal grid #2 current	7 mA	ClassA
Load resistance	7500 ohm	ClassA
Power output	2.8 W	ClassA
Total harmonic distortion	8 %	ClassA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak-to-peak voltage output	132 V	VideoAmplifier;4MHzBandwidth



SOURCE OPERATING CONDITIONS

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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

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Nominal
Heater current	650 mA	Nominal
Maximum plate voltage	330 V	Promoted published value
Maximum screen voltage	330 V	Promoted published value
Maximum plate dissipation	8.5 W	Promoted published value
Maximum screen dissipation	2 W	Promoted published value
Grid No.1 to plate	0.12 mA	Direct Interelectrode Capacitances:°
PLATE VOLTAGE.	330 V	Maximum Ratings, Design-Maximum Palues:
GRID-No.3 (SUPPRESSOR-GRID) VOLTAGE	0 V	Maximum Ratings, Design-Maximum Palues:
GRID-No.2 (SCREEN-GRID1 SUPPLY VOLTAGE .	330 V	Maximum Ratings, Design-Maximum Palues:
GRID-No.2 VOLTAGE See Grid-No.2 Inqut Rating Chart	2 V	Maximum Ratings, Design-Maximum Palues:
GRID-No.1 (CONTROL-GRID) VOLTAGE	1 V	Maximum Ratings, Design-Maximum Palues:
For grid-No.2 voltages up to	2 V	Maximum Ratings, Design-Maximum Palues:

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	150000 ohm	Promoted published value
Transconductance	11000 uS	Promoted published value
Voltage	20 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Current at	0.65 V	—



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1971 RCA HB3 Binder 4 of 7

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1971 RCA HB3 BINDER 4 OF 7

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Current__	650 mA	—
Output	5.5 pF	—
Plate Voltage	250 V	—
Grid-No.1 Voltage	-3 V	—
Peak AE Grid-No.1 Signa) Voltage	3 V	—
Zero-Signal DC Plate Current	30 mA	—
Max.-Signal DC Plate Current	31 mA	—
Plate Resistance (Approx.)	0 MΩ	Published table column 1 of 2
Plate Resistance (Approx.)	15 MΩ	Published table column 2 of 2
Transconductance	11000 μS	—
plate current of	10 V	Published table column 1 of 2
plate current of	-14 V	Published table column 2 of 2
Load Resistance	7500 Ω	—
Max.-Signal Pauer Output	2.8 W	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Supply Voltage	300 V	—
Grid-No.1 Bias Voltage	-2 V	—

SOURCE OPERATING CONDITIONS

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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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tube Voltage Drop for plate current of	25 mA	Published datasheet value
Peak Inverse Plate Voltage#	5500 volts	Published datasheet value
Peak Plate Current	1300 mA	Published datasheet value
Average Plate Current	250 mA	Published datasheet value
Plate Dissipation	8.5 watts	Published datasheet value
Tube Voltage Drop for plate current of	16 mA	Published datasheet value
Plate Voltage	300 volts	Published datasheet value
Grid-No	0 volts	Published datasheet value
Grid-No	300 volts	Published datasheet value
Grid-No	150 volts	Published datasheet value
Plate Dissipation	7.6 watts	Published datasheet value

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate to Cathode and Heater	6.5 pF	Published datasheet value
Cathode to Plate and Heater	9 pF	Published datasheet value
Heater to Cathode	3 pF	Published datasheet value
Plate to Cathode, Heater, Grid No	3	Published datasheet value

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Heater-Cathode Voltage ±	100 volts	Published datasheet value

TUBE TINKER

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