

ELECTRONIC TUBE REFERENCE

6AU8A

Voltage - Triode Pentode electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Combined triode-pentode for television video, IF, AGC, sync, burst, band-pass, or related signal-processing stages.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9DX	BASE PINS	9
NOMINAL HEATER	6.3 V / 600 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

9DX - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	100000 Ω
TRANSCONDUCTANCE	0.008 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	3 W
MAXIMUM SCREEN DISSIPATION	1 W
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
<i>Promoted from published ratings/characteristics; identical repeated sections compressed where applicable.</i>	

SECTION2 Triode	
PLATE RESISTANCE	8100 Ω
TRANSCONDUCTANCE	0.0053 S
AMPLIFICATION FACTOR	43
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	2.5 W
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
<i>Promoted from published ratings/characteristics; identical repeated sections compressed where applicable.</i>	

Medium-mu triode plus sharp-cutoff pentode for television video/IF/AGC and sync-amplifier, sync-separator, sync-clipper, and phase-inverter circuits.



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
Heater voltage	6.3 V	—
Heater current	600 mA	—
Plate voltage	200 V	ClassA1
Grid 2 voltage	125 V	ClassA1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pentode grid to plate	0.06 pF	—

1961 TUNG SOL

Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	150 V	ClassA1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode grid to plate	2.2 pF	—



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
Heater voltage	6.3 V	—
Heater current	600 mA	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	300 V	—
Maximum screen supply voltage	300 V	—
Maximum plate dissipation	3 W	—
Maximum screen dissipation	1 W	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.04 pF	—
Input capacitance	10 pF	—
Output capacitance	4.5 pF	—

1965 SYLVANIA ELECTRONIC TUBES VOL3

Section 2 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	600 mA	—
Amplification factor	20	—
Plate resistance	6250 ohm	—
Transconductance	3200 uS	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	300 V	—
Typical plate voltage	150 V	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	2.2 pF	—
Input capacitance	3.4 pF	—
Output capacitance	3 pF	—



SOURCE DATA APPENDIX

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage nominal	6.3 V	—
Heater current	600 mA	—
Maximum plate voltage	330 V	ClassA1
Maximum plate dissipation	3.3 W	ClassA1
Maximum screen supply voltage	330 V	ClassA1
Maximum screen input at ≤165 V	1 W	ClassA1

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater warm-up time	11 s	Average
Plate supply voltage	200 V	ClassA1
Screen supply voltage	125 V	ClassA1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode resistor	82 ohm	ClassA1
Plate resistance	100000 ohm	ClassA1
Transconductance	8000 μ S	ClassA1
Plate current	17 mA	ClassA1
Screen current	3.4 mA	ClassA1

1971 RCA HB3 BINDER 4 OF 7

Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage nominal	6.3 V	—
Heater current	600 mA	—
Maximum plate voltage	330 V	ClassA1
Maximum plate dissipation	2.8 W	ClassA1

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater warm-up time	11 s	Average
Plate supply voltage	150 V	ClassA1
Cathode resistor	150 ohm	ClassA1
Amplification factor	43	ClassA1
Plate resistance	8100 ohm	ClassA1
Transconductance	5300 μ S	ClassA1
Plate current	9.5 mA	ClassA1



SOURCE DATA APPENDIX

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
Heater Current	600 mA	Published in approved 6AU8A target entry; Section2
Heater Warm-up Time (Average)	11 seconds	Published in approved 6AU8A target entry; Section2
Plate Voltage 330	330 V	Published in approved 6AU8A target entry; Section2
Grid-No.2 (Screen-Grid) Supply Voltage	330 V	Published in approved 6AU8A target entry; Section2
Grid-No.1 (Control-Grid) Voltage, Positive-bias value 0	0 V	Published in approved 6AU8A target entry; Section2
Plate Dissipation 2.8	3.3 W	Published in approved 6AU8A target entry; Section2
For grid-No. 2 voltages up to	165 V	Published in approved 6AU8A target entry; Section2
For grid-No. 2 voltages up to 165 volts	1 W	Published in approved 6AU8A target entry; Section2
For grid-No.2 voltages between 165 and	330 V	Published in approved 6AU8A target entry; Section2
Plate Supply Voltage 150	200 V	Published in approved 6AU8A target entry; Section2
Grid-No.2 Supply Voltage	125 V	Published in approved 6AU8A target entry; Section2
For fixed-bias operation 0.5	0.25 MΩ	Published in approved 6AU8A target entry; Section2
For cathode-bias operation 1	1 MΩ	Published in approved 6AU8A target entry; Section2
Heater Voltage (ac/dc) 6.3 12.6	25 V	Published in approved 6AU8A target entry; Section2
Heater Current 1.2 0.6	300 mA	Published in approved 6AU8A target entry; Section2

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate	2.2 pF	Published in approved 6AU8A target entry; Section2
Grid to Cathode and Heater	2.6 pF	Published in approved 6AU8A target entry; Section2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate to Cathode and Heater	0.34 pF	Published in approved 6AU8A target entry; Section2
Grid No.1 to Plate	0.06 pF	Published in approved 6AU8A target entry; Section2
Internal Shield	7.5 pF	Published in approved 6AU8A target entry; Section2
Internal Shield	3.4 pF	Published in approved 6AU8A target entry; Section2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance (Approx.) 8100	100000 Ω	Published in approved 6AU8A target entry; Section2
Transconductance 5300	8000 μS	Published in approved 6AU8A target entry; Section2
Plate Current 9.5	17 mA	Published in approved 6AU8A target entry; Section2
Grid-No.2 Current	3.4 mA	Published in approved 6AU8A target entry; Section2
100 ;.A -6.5	-7.5 V	Published in approved 6AU8A target entry; Section2

1975 RCA RC30

Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Current	600 mA	Published in approved 6AU8A target entry; Section1
Heater Warm-up Time (Average)	11 seconds	Published in approved 6AU8A target entry; Section1
Plate Voltage 330	330 V	Published in approved 6AU8A target entry; Section1
Grid-No.2 (Screen-Grid) Supply Voltage	330 V	Published in approved 6AU8A target entry; Section1
Grid-No.1 (Control-Grid) Voltage, Positive-bias value 0	0 V	Published in approved 6AU8A target entry; Section1
Plate Dissipation 2.8	3.3 W	Published in approved 6AU8A target entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For grid-No. 2 voltages up to	165 V	Published in approved 6AU8A target entry; Section1
For grid-No. 2 voltages up to 165 volts	1 W	Published in approved 6AU8A target entry; Section1
For grid-No.2 voltages between 165 and	330 V	Published in approved 6AU8A target entry; Section1
Plate Supply Voltage 150	200 V	Published in approved 6AU8A target entry; Section1
Grid-No.2 Supply Voltage	125 V	Published in approved 6AU8A target entry; Section1
For fixed-bias operation 0.5	0.25 MΩ	Published in approved 6AU8A target entry; Section1
For cathode-bias operation 1	1 MΩ	Published in approved 6AU8A target entry; Section1
Heater Voltage (ac/dc) 6.3 12.6	25 V	Published in approved 6AU8A target entry; Section1
Heater Current 1.2 0.6	300 mA	Published in approved 6AU8A target entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate	2.2 pF	Published in approved 6AU8A target entry; Section1
Grid to Cathode and Heater	2.6 pF	Published in approved 6AU8A target entry; Section1
Plate to Cathode and Heater	0.34 pF	Published in approved 6AU8A target entry; Section1
Grid No.1 to Plate	0.06 pF	Published in approved 6AU8A target entry; Section1
Internal Shield	7.5 pF	Published in approved 6AU8A target entry; Section1
Internal Shield	3.4 pF	Published in approved 6AU8A target entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance (Approx.) 8100	100000 Ω	Published in approved 6AU8A target entry; Section1
Transconductance 5300	8000 μS	Published in approved 6AU8A target entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current 9.5	17 mA	Published in approved 6AU8A target entry; Section1
Grid-No.2 Current	3.4 mA	Published in approved 6AU8A target entry; Section1
100 ;.A -6.5	-7.5 V	Published in approved 6AU8A target entry; Section1

TUBE TINKER

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