

ELECTRONIC TUBE REFERENCE

6AW8A

Voltage Pentode - Sharp Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

High-mu triode plus sharp-cutoff pentode for television IF, video, AGC/reactance, oscillator, sync, and phase-splitter circuits.

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	400000 Ω
TRANSCONDUCTANCE	0.009 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	3.75 W
MAXIMUM SCREEN DISSIPATION	1.1 W
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
<i>Promoted from published ratings/characteristics; identical repeated sections compressed where applicable.</i>	

SECTION2 Triode	
PLATE RESISTANCE	17500 Ω
TRANSCONDUCTANCE	0.004 S
AMPLIFICATION FACTOR	70
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	1.1 W
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
<i>Promoted from published ratings/characteristics; identical repeated sections compressed where applicable.</i>	

High-mu triode plus sharp-cutoff pentode for television IF, video, AGC/reactance, oscillator, sync, and phase-splitter 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 current	4 mA	Typical operating conditions

1961 TUNG SOL

Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	600 mA	—
Plate current	4 mA	Typical operating conditions

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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	600 mA	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	330 V	—
Maximum screen supply voltage	330 V	—
Maximum plate dissipation	3.75 W	—
Maximum screen dissipation	1.1 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	70	—
Transconductance	4000 μ S	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	330 V	—
Maximum plate dissipation	1.1 W	—
Typical plate voltage	200 V	—
Typical grid voltage	-2 V	—
Plate current	4 mA	—

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



SOURCE OPERATING CONDITIONS

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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 2 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published table
Heater current	600 mA	Published table
Triode transconductance	4000 μ S	TriodeSection
Triode amplification factor	70	TriodeSection
Pentode plate resistance	200000 ohm	PentodeSection
Pentode transconductance	9500 μ S	PentodeSection

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode plate voltage	200 V	TriodeSection SyncSeparator
Triode grid voltage	-2 V	TriodeSection
Triode plate current	4 mA	TriodeSection
Pentode plate voltage	150 V	PentodeSection VideoAmplifier
Pentode screen voltage	150 V	PentodeSection VideoAmplifier
Pentode plate current	15 mA	PentodeSection VideoAmplifier
Pentode screen current	3.5 mA	PentodeSection VideoAmplifier



SOURCE OPERATING CONDITIONS

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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	3.75 W	ClassA1
Maximum screen supply voltage	330 V	ClassA1
Maximum screen input at ≤165 V	1.1 W	ClassA1

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater warm-up time	11 s	Average
Plate supply voltage	150 V	ClassA1
Screen supply voltage	150 V	ClassA1
Cathode resistor	150 ohm	ClassA1
Plate resistance	200000 ohm	ClassA1
Transconductance	9500 μS	ClassA1
Plate current	15 mA	ClassA1
Screen current	3.5 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	1.1 W	ClassA1

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

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid voltage	-2 V	ClassA1
Amplification factor	70	ClassA1
Plate resistance	17500 ohm	ClassA1
Transconductance	4000 μ S	ClassA1
Plate current	4 mA	ClassA1



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 Voltage (ac/dc) 6.3	8.4 V	Published in approved 8AW8A target datasheet entry; Section2
Heater Current 0.6	450 mA	Published in approved 8AW8A target datasheet entry; Section2
Heater Warm-up Time (Average) 11	11 seconds	Published in approved 8AW8A target datasheet entry; Section2
Plate Voltage 330	330 V	Published in approved 8AW8A target datasheet entry; Section2
Grid-No.2 (Screen-Grid) Supply Voltage	330 V	Published in approved 8AW8A target datasheet entry; Section2
0	0 V	Published in approved 8AW8A target datasheet entry; Section2
Plate Dissipation 1.1	3.75 W	Published in approved 8AW8A target datasheet entry; Section2
For grid-No.2 voltages up to	165 V	Published in approved 8AW8A target datasheet entry; Section2
For grid-No.2 voltages between 165 and	330 V	Published in approved 8AW8A target datasheet entry; Section2
Plate Resistance (Approx.) –	0.2 M Ω	Published in approved 8AW8A target datasheet entry; Section2
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PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current 4	15 mA	Published in approved 8AW8A target datasheet entry; Section2
Grid-No. 2 Current	3.5 mA	Published in approved 8AW8A target datasheet entry; Section2
20 fiA -5	-8 V	Published in approved 8AW8A target datasheet entry; Section2
For fixed-bias operation 0.5	0.25 MΩ	Published in approved 8AW8A target datasheet entry; Section2
For cathode-bias operation 1	1 MΩ	Published in approved 8AW8A target datasheet entry; Section2

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate 2.2	2.2 pF	Published in approved 8AW8A target datasheet entry; Section2
Grid No.3, Internal Shield, and Heater 3.2	3.4 pF	Published in approved 8AW8A target datasheet entry; Section2
Grid No.3, Internal Shield, and Heater 1.8	3 pF	Published in approved 8AW8A target datasheet entry; Section2
Grid No.3, and Internal Shield 10	10 pF	Published in approved 8AW8A target datasheet entry; Section2
No.3, and Internal Shield 3.6	4.5 pF	Published in approved 8AW8A target datasheet entry; Section2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Supply Voltage 200	150 V	Published in approved 8AW8A target datasheet entry; Section2
Cathode-Bias Resistor	150 Ω	Published in approved 8AW8A target datasheet entry; Section2

1975 RCA RC30

Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) 6.3	8.4 V	Published in approved 8AW8A target datasheet entry; Section1
Heater Current 0.6	450 mA	Published in approved 8AW8A target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Warm-up Time (Average) 11	11 seconds	Published in approved 8AW8A target datasheet entry; Section1
Plate Voltage 330	330 V	Published in approved 8AW8A target datasheet entry; Section1
Grid-No.2 (Screen-Grid) Supply Voltage	330 V	Published in approved 8AW8A target datasheet entry; Section1
0	0 V	Published in approved 8AW8A target datasheet entry; Section1
Plate Dissipation 1.1	3.75 W	Published in approved 8AW8A target datasheet entry; Section1
For grid-No.2 voltages up to	165 V	Published in approved 8AW8A target datasheet entry; Section1
For grid-No.2 voltages between 165 and	330 V	Published in approved 8AW8A target datasheet entry; Section1
Plate Resistance (Approx.) – •	0.2 MΩ	Published in approved 8AW8A target datasheet entry; Section1
Plate Current 4	15 mA	Published in approved 8AW8A target datasheet entry; Section1
Grid-No. 2 Current	3.5 mA	Published in approved 8AW8A target datasheet entry; Section1
20 fiA –5	-8 V	Published in approved 8AW8A target datasheet entry; Section1
For fixed-bias operation 0.5	0.25 MΩ	Published in approved 8AW8A target datasheet entry; Section1
For cathode-bias operation 1	1 MΩ	Published in approved 8AW8A target datasheet entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate 2.2	2.2 pF	Published in approved 8AW8A target datasheet entry; Section1
Grid No.3, Internal Shield, and Heater 3.2	3.4 pF	Published in approved 8AW8A target datasheet entry; Section1
Grid No.3, Internal Shield, and Heater 1.8	3 pF	Published in approved 8AW8A target datasheet entry; Section1
Grid No.3, and Internal Shield 10	10 pF	Published in approved 8AW8A target datasheet entry; Section1
No.3, and Internal Shield 3.6	4.5 pF	Published in approved 8AW8A target datasheet entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Supply Voltage 200	150 V	Published in approved 8AW8A target datasheet entry; Section1
Cathode-Bias Resistor	150 Ω	Published in approved 8AW8A target datasheet entry; Section1