

ELECTRONIC TUBE REFERENCE

6AX8

Voltage Pentode - Sharp Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Triode-pentode designed for television video-amplifier and sync-separator service, combining video gain and synchronization functions in one envelope.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9AE	BASE PINS	9
NOMINAL HEATER	6.3 V / 450 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

9AE - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	5000 Ω
TRANSCONDUCTANCE	0.0085 S
AMPLIFICATION FACTOR	40
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	2.7 W
<i>Medium-mu triode unit; Class A1 values at 150 V plate supply.</i>	

SECTION2 Pentode	
PLATE RESISTANCE	400000 Ω
TRANSCONDUCTANCE	0.0048 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	2.8 W
MAXIMUM SCREEN DISSIPATION	0.5 W
<i>Sharp-cutoff pentode unit; Class A1 values at 250 V plate and 110 V screen supply.</i>	

Triode-pentode for television video-amplifier and sync-separator service.



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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	450 mA	—
Plate current	18 mA	Typical operating conditions

1961 TUNG SOL

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	450 mA	—
Plate current	18 mA	Typical operating conditions



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 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	150 V	TriodeSection
Plate current	10 mA	TriodeSection

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	6000 Ω	TriodeSection
Transconductance	6500 μS	TriodeSection
Amplification factor	40	TriodeSection

1966 TUNG SOL ELECTRONIC TUBES 1 OF 4

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	125 V	PentodeSection
Screen voltage	125 V	PentodeSection
Plate current	12 mA	PentodeSection
Screen current	3.5 mA	PentodeSection

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	250000 Ω	PentodeSection
Transconductance	9000 μS	PentodeSection
Cutoff characteristic	Sharp	PentodeSection



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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage nominal	6.3 V	—
Heater current	450 mA	—
Maximum plate voltage	300 V	ClassA1

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply voltage	150 V	ClassA1
Cathode resistor	56 ohm	ClassA1
Amplification factor	40	ClassA1
Plate resistance	5000 ohm	ClassA1
Transconductance	8500 μ S	ClassA1
Plate current	18 mA	ClassA1
Grid voltage for plate current 10 μ A	-12 V	ClassA1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	1.8 pF	—
Input capacitance	2.5 pF	—
Output capacitance	1 pF	—

1971 RCA HB3 BINDER 4 OF 7

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage nominal	6.3 V	—
Heater current	450 mA	—
Maximum plate voltage	300 V	ClassA1
Maximum screen supply voltage	300 V	ClassA1

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply voltage	250 V	ClassA1
Screen supply voltage	110 V	ClassA1
Cathode resistor	120 ohm	ClassA1
Plate resistance	400000 ohm	ClassA1
Transconductance	4800 μ S	ClassA1
Plate current	10 mA	ClassA1
Screen current	3.5 mA	ClassA1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid voltage for plate current 10 μ A	-12 V	ClassA1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1-to-plate capacitance	0.006 pF	—
Input capacitance	5 pF	—
Output capacitance	3.5 pF	—