

ELECTRONIC TUBE REFERENCE

6DX8

Voltage Pentode - Sharp Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA
2 SECTIONS
CONSTRUCTION
PENTODE-TRIODE

High-mu triode plus sharp-cutoff pentode designed for television sync/noise circuitry and video-output service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9HX	BASE PINS	9
NOMINAL HEATER	6.3 V / 720 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

9HX - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	16250 Ω
TRANSCONDUCTANCE	0.004 S
AMPLIFICATION FACTOR	65
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	1 W
MAXIMUM CATHODE CURRENT	12 mA
<i>High-mu triode section.</i>	

SECTION2 Pentode	
PLATE RESISTANCE	130000 Ω
TRANSCONDUCTANCE	0.0104 S
AMPLIFICATION FACTOR	65
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	4 W
MAXIMUM SCREEN DISSIPATION	1.7 W
MAXIMUM CATHODE CURRENT	40 mA
<i>Sharp-cutoff video-output pentode section.</i>	

High-mu triode plus sharp-cutoff pentode used in television sync/noise circuits and video-output service.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Amperex Condensed

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

1963 AMPEREX CONDENSED

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode plate voltage	200 V	TriodeSection KeyedAGC
Triode control-grid bias	-1.7 V	TriodeSection KeyedAGC
Triode plate current	3 mA	TriodeSection KeyedAGC

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode amplification factor	65	TriodeSection KeyedAGC

1963 AMPEREX CONDENSED

Section 2 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published heater rating
Heater current	720 mA	Published heater rating
Pentode plate resistance	3000 ohm	PentodeSection VideoOutput
Pentode transconductance	9700 μ S	PentodeSection VideoOutput

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pentode screen voltage	220 V	PentodeSection VideoOutput
Pentode plate current	18 mA	PentodeSection VideoOutput
Pentode screen current	3.1 mA	PentodeSection VideoOutput

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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	200 V	TriodeSection
Plate current	3 mA	TriodeSection
Peak pulse plate voltage	600 V	TriodeSection

1966 TUNG SOL ELECTRONIC TUBES 2 OF 4

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	170 V	PentodeSection
Grid 2 voltage	170 V	PentodeSection
Grid 1 bias	-2.1 V	PentodeSection
Plate current	18 mA	PentodeSection
Grid 2 current	3 mA	PentodeSection



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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	720 mA	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	200 V	Triode;ClassA
Grid voltage	-1.7 V	Triode;ClassA
Plate current	3 mA	Triode;ClassA
Maximum plate voltage	300 V	Triode
Plate dissipation	1 W	Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification factor	65	Triode
Transconductance	4000 μ S	Triode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	2.7 pF	Triode

1971 RCA HB3 BINDER 4 OF 7

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	200 V	Pentode;ClassA
Screen voltage	200 V	Pentode;ClassA
Grid voltage	-2.9 V	Pentode;ClassA
Plate current	18 mA	Pentode;ClassA
Screen current	3 mA	Pentode;ClassA
Plate dissipation	4 W	Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	130000 ohm	Pentode
Transconductance	10400 μ S	Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.1 pF	Pentode
Input capacitance	9 pF	Pentode
Output capacitance	4.5 pF	Pentode

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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) 6.3	10.2 V	Published in approved ECL84 target datasheet entry; Section1
Heater Current 0.72	450 mA	Published in approved ECL84 target datasheet entry; Section1
Plate Supply Voltage 550	550 V	Published in approved ECL84 target datasheet entry; Section1
Plate Voltage 300	300 V	Published in approved ECL84 target datasheet entry; Section1
Grid-No.2 Voltage	300 V	Published in approved ECL84 target datasheet entry; Section1
Cathode Current 12	40 mA	Published in approved ECL84 target datasheet entry; Section1
Plate Dissipation 1	4 W	Published in approved ECL84 target datasheet entry; Section1
Grid-No.2 Input	1.7 W	Published in approved ECL84 target datasheet entry; Section1
Plate Voltage 200 170 200	220 V	Published in approved ECL84 target datasheet entry; Section1
For fixed-bias operation 1	1 MΩ	Published in approved ECL84 target datasheet entry; Section1
For cathode-bias operation 3	2 MΩ	Published in approved ECL84 target datasheet entry; Section1
• With maximum duty factor of 0.18 and maximum pulse duration of	18 microseconds	Published in approved ECL84 target datasheet entry; Section1
the frequency range from 470 to	890 MHz	Published in approved ECL84 target datasheet entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 Voltage -1.7 -2.1	-3.4 V	Published in approved ECL84 target datasheet entry; Section1
Plate Resistance (Approx.) – 0.1 0.13	0.15 MΩ	Published in approved ECL84 target datasheet entry; Section1
Transconductance 4000 11000 10400	10000 μS	Published in approved ECL84 target datasheet entry; Section1
Plate Current 3 18 18	18 mA	Published in approved ECL84 target datasheet entry; Section1
Grid-No.2 Current – 3 3	3 mA	Published in approved ECL84 target datasheet entry; Section1
Heater Voltage (ac/dc)	6.3 V	Published in approved ECL84 target datasheet entry; Section1
Heater Current	225 mA	Published in approved ECL84 target datasheet entry; Section1
Grid to Plate	18 pF	Published in approved ECL84 target datasheet entry; Section1
Grid to Cathode and Heater	2.2 pF	Published in approved ECL84 target datasheet entry; Section1
Plate to Cathode and Heater	1.3 pF	Published in approved ECL84 target datasheet entry; Section1

1975 RCA RC30

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) 6.3	10.2 V	Published in approved ECL84 target datasheet entry; Section2
Heater Current 0.72	450 mA	Published in approved ECL84 target datasheet entry; Section2
Plate Supply Voltage 550	550 V	Published in approved ECL84 target datasheet entry; Section2
Plate Voltage 300	300 V	Published in approved ECL84 target datasheet entry; Section2
Grid-No.2 Voltage	300 V	Published in approved ECL84 target datasheet entry; Section2
Cathode Current 12	40 mA	Published in approved ECL84 target datasheet entry; Section2
Plate Dissipation 1	4 W	Published in approved ECL84 target datasheet entry; Section2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.2 Input	1.7 W	Published in approved ECL84 target datasheet entry; Section2
Plate Voltage 200 170 200	220 V	Published in approved ECL84 target datasheet entry; Section2
For fixed-bias operation 1	1 MΩ	Published in approved ECL84 target datasheet entry; Section2
For cathode-bias operation 3	2 MΩ	Published in approved ECL84 target datasheet entry; Section2
• With maximum duty factor of 0.18 and maximum pulse duration of	18 microseconds	Published in approved ECL84 target datasheet entry; Section2
the frequency range from 470 to	890 MHz	Published in approved ECL84 target datasheet entry; Section2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 Voltage -1.7 -2.1	-3.4 V	Published in approved ECL84 target datasheet entry; Section2
Plate Resistance (Approx.) – 0.1 0.13	0.15 MΩ	Published in approved ECL84 target datasheet entry; Section2
Transconductance 4000 11000 10400	10000 μS	Published in approved ECL84 target datasheet entry; Section2
Plate Current 3 18 18	18 mA	Published in approved ECL84 target datasheet entry; Section2
Grid-No.2 Current – 3 3	3 mA	Published in approved ECL84 target datasheet entry; Section2
Heater Voltage (ac/dc)	6.3 V	Published in approved ECL84 target datasheet entry; Section2
Heater Current	225 mA	Published in approved ECL84 target datasheet entry; Section2
Grid to Plate	18 pF	Published in approved ECL84 target datasheet entry; Section2
Grid to Cathode and Heater	2.2 pF	Published in approved ECL84 target datasheet entry; Section2
Plate to Cathode and Heater	1.3 pF	Published in approved ECL84 target datasheet entry; Section2



1999 Philips 0-D

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

1999 PHILIPS 0-D
Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode plate voltage	250 V	Section2
Triode plate dissipation	1 W	Section2

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode amplification factor	65	Section2

1999 PHILIPS 0-D
Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pentode plate voltage	250 V	Section1
Pentode screen voltage	250 V	Section1
Pentode plate dissipation	4 W	Section1
Pentode screen dissipation	1.7 W	Section1
Pentode cathode current	40 mA	Section1
Flate woltage(without curreats)	550 volts	PublishedLine: Flate woltage(without curreats) 550 volts
Plate woltage	250 volts	PublishedLine: Plate woltage 250 volts
with cathods bLias	2 megohms	PublishedLine: with cathods bLias 2 megohms
Flate voltege(without curr nt)	550 volts	PublishedLine: Flate voltege(without currént) ;550 volts
Feak plate voltage(see note	633 volts	PublishedLine: Feak plate voltage(see note 1) 633 volts
Flate disaipation	1 watt	PublishedLine: Flate disaipation 1 watt
with cathede bias	3 megohms	PublishedLine: with cathede bias 3 megohms
Flate voltags	200 volts	PublishedLine: Flate voltags 200 volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Flate sugpl voltaga	250 volts	PublishedLine: Flate sugpl: voltaga 200 250 volts
grid No	250 volts	PublishedLine: grid No.2 supply voltage 200 250 volts
Nax.-signal plate currant	15 mA	PublishedLine: Nax.-signal plate currant 18.5 15.0 mA
surTant G.	4.5 mA	PublishedLine: surTant G.& 4.5 mA
Plate losd resistancs	17500 ohms	PublishedLine: Plate losd resistancs 1,000 17,500 ohms
Pomar output	1.65 watts	PublishedLine: Pomar output 1.65 1.65 watts
Connon cathode resistor	117 ohms	PublishedLine: Connon cathode resistor 117 ohms

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pentode transconductance	10000 uS	Section1
Pentode amplification factor g2-g1	36	Section1