



ELECTRONIC TUBE REFERENCE

6KA8

Voltage Triode Pentode electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

High-mu triode and sharp-cutoff pentode for television sync-separator and specialized pentode-amplifier circuits.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9pV	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

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	17500 Ω
TRANSCONDUCTANCE	0.004 S
AMPLIFICATION FACTOR	70
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	1.1 W
Representative electrical section from supplied RCA data sheet.	

SECTION2 Pentode	
PLATE RESISTANCE	100000 Ω
TRANSCONDUCTANCE	0.0044 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	2 W
MAXIMUM SCREEN DISSIPATION	1.1 W
<i>Representative electrical section from supplied RCA data sheet.</i>	

High-mu triode and sharp-cutoff pentode for television sync-separator and specialized pentode amplifier circuits. Explicit heater variant/co-designation of 8KA8 in the approved source.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1950 Sylvania

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

1950 SYLVANIA

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	17500 ohm	—
Transconductance	4000 μ S	—
Amplification Factor	70	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	300 V	—
Maximum Plate Dissipation	1.1 W	—
Plate Voltage	200 V	Triode sync separator

1950 SYLVANIA

Section 2 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	100000 ohm	—
Transconductance	4400 μ S	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	300 V	—
Maximum Screen Voltage	300 V	—
Maximum Plate Dissipation	2 W	—
Maximum Screen Dissipation	1.1 W	—
Plate Voltage	150 V	Pentode AGC/noise inverter
Screen Voltage	100 V	Pentode section

SOURCE OPERATING CONDITIONS

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1971 RCA HB3 Binder 5 of 7

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

1971 RCA HB3 BINDER 5 OF 7

Section 1 · Triode

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

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
shield, grid No	3	Published source row
shield, grid No (value 2)	2	Published source row
shield, plate, grid No	2	Published source row
`~ Plate Supply Voltage	200 V	Published source row
`~ Plate Supply Voltage (value 2)	150 V	Published source row
Grid-No	3 V	Published source row
Grid-No (value 2)	0 V	Published source row
Grid-No	2 V	Published source row
Grid-No (value 2)	100 V	Published source row
Grid-No.1 Supply Voltage	-2 V	Published source row
Grid-No.1 Supply Voltage (value 2)	0 V	Published source row
Cathode Resistor	180 ohm	Published source row
Amplification Factor	70	Published source row
Plate Resistance (Approx.)	17500 ohm	Published source row
Plate Resistance (Approx.) (value 2)	100000 ohm	Published source row
Transconductance, Grid No	3	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	4 mA	Published source row
Plate Current (value 2)	4 mA	Published source row
Grid-No	2 mA	Published source row
Grid-No (value 2)	2.8 mA	Published source row
Grid-No	3	Published source row
Internal Grid No	2	Published source row

1971 RCA HB3 BINDER 5 OF 7

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage nominal	6.3 V	—
Heater current	600 mA	—
PLATE VOLTAGE	300 V	Published source row
PEAK POSITIVE-PULSE PLATE VOLTAGE ^f	600 V	Published source row
GRID-No	3	Published source row
GRID-No	2	Published source row
SUPPLY VOLTAGE	300	Published source row
GRID-No	2	Published source row
GRID-No.1 (CONTROL-G1	71	Published source row
GRID-No	2	Published source row
For grid-No	2	Published source row
For grid-No	2	Published source row
Published electrical value	11	Published source row
Published electrical value (value 2)	300	Published source row
Published electrical value (value 3)	2	Published source row
PLATE DISSIPATION	2 W	Published source row
Grid-No	3 Mohm	Published source row
Grid-No (value 2)	0.68 Mohm	Published source row
PLATE VOLTAGE	300 V	Published source row
PLATE DISSIPATION	1.1 W	Published source row

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC)	6.3 A	Published source row
Voltage (AC or DC) (value 2)	6.3 A	Published source row
Voltage (AC or DC) (value 3)	600 mA	Published source row
Current	600 mA	Published source row
Current (value 2)	40 mA	Published source row
Current (value 3)	600.6 mA	Published source row
PLATE (J:b1 OR GRID-No	2	Published source row
PLATE (J:b1 OR GRID-No (value 2)	2	Published source row
GRID-No	2 V	Published source row
GRID-No (value 2)	100 V	Published source row
PLATE (Ib) OR GRID-No	2	Published source row
PLATE (Ib) OR GRID-No (value 2)	2	Published source row
GRID-No	2 V	Published source row
GRID-No (value 2)	100 V	Published source row
GRID-No	2 V	Published source row
GRID-No (value 2)	100 V	Published source row



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 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Warm-up Time (Average)	11 s	Characteristic;PublishedValue1
Heater Warm-up Time (Average)	11 s	Characteristic;PublishedValue2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak value	200 V	Characteristic;PublishedValue1
Peak value	200 V	Characteristic;PublishedValue2
Average value	100 V	Characteristic;PublishedValue1
Average value	100 V	Characteristic;PublishedValue2
Plate Supply Voltage	200 V	Characteristic;PublishedValue1
Plate Supply Voltage	150 V	Characteristic;PublishedValue2
Grid-No	3 V	Characteristic;PublishedValue1
Grid-No	0 V	Characteristic;PublishedValue2
Grid-No	2 V	Characteristic;PublishedValue1
Grid-No	100 V	Characteristic;PublishedValue2
Grid-No.1 Supply Voltage –	2 V	Characteristic;PublishedValue1
Grid-No.1 Supply Voltage –	0 V	Characteristic;PublishedValue2
Plate Resistance (Approx.)	17500 ohm	Characteristic;PublishedValue1
Plate Resistance (Approx.)	100000 ohm	Characteristic;PublishedValue2
Plate Current	4 mA	Characteristic;PublishedValue1
Plate Current	4 mA	Characteristic;PublishedValue2
Grid-No	2 mA	Characteristic;PublishedValue1
Grid-No	2.8 mA	Characteristic;PublishedValue2
For plate current of	10 V	Characteristic;PublishedValue1
For plate current of	-5 V	Characteristic;PublishedValue2
For plate current of	20 V	Characteristic;PublishedValue1
For plate current of	-4 V	Characteristic;PublishedValue2
Published value	20 V	Characteristic;PublishedValue1
Published value	-7 V	Characteristic;PublishedValue2
Plate Resistance	17500 ohm	Section1
Transconductance	4000 uS	Section1
Amplification Factor	70	Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate	2.2 pF	Capacitance
Grid to Cathode, Heater, and Internal Shield	2.8 pF	Capacitance

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate to Cathode, Heater, and Internal Shield	2.2 pF	Capacitance
Grid No.1 to Plate	0.1 pF	Capacitance
and Internal Shield	9.5 pF	Capacitance
Grid No.1 to Grid No	3 pF	Capacitance;PublishedValue1
Grid No.1 to Grid No	0.5 pF	Capacitance;PublishedValue2
Grid No	3 pF	Capacitance;PublishedValue1
Grid No	2.2 pF	Capacitance;PublishedValue2
Grid No	3 pF	Capacitance;PublishedValue1
Grid No	7 pF	Capacitance;PublishedValue2

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	300 V	MaximumRating
Positive-bias value	0 V	MaximumRating
Negative-bias value	50 V	MaximumRating
Plate Dissipation	1.1 W	MaximumRating
For fixed-bias operation	0.25 megohm	MaximumCircuitValue
For cathode-bias operation	1 megohm	MaximumCircuitValue
DC Plate Voltage	300 V	MaximumRating
Peak Positive-Pulse Plate Voltage#	600 V	MaximumRating
Negative-bias value –	1000 V	MaximumRating
Grid-No	2 V	MaximumRating;PublishedValue1
Grid-No	300 V	MaximumRating;PublishedValue2
Negative-bias value –	500 V	MaximumRating
Plate Dissipation	2 W	MaximumRating
For grid-No	2 V	MaximumRating;PublishedValue1
For grid-No	150 V	MaximumRating;PublishedValue2
For grid-No	1.1 V	MaximumRating;PublishedValue3
For grid-No	2 V	MaximumRating;PublishedValue1
For grid-No	150 V	MaximumRating;PublishedValue2
For grid-No	300 V	MaximumRating;PublishedValue3

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For grid-No	300 V	MaximumRating;PublishedValue4
Grid-No	3 megohm	MaximumCircuitValue;PublishedValue1
Grid-No	0.68 megohm	MaximumCircuitValue;PublishedValue2
For fixed-bias operation	0.5 megohm	MaximumCircuitValue
Maximum Plate Voltage	300 V	Section1
Maximum Plate Dissipation	1.1 W	Section1

1975 RCA RC30

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	300 V	Section2
Maximum Screen Voltage	300 V	Section2
Maximum Plate Dissipation	2 W	Section2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	100000 ohm	Section2
Transconductance	4400 uS	Section2