



ELECTRONIC TUBE REFERENCE

6KT8

Voltage - Triode Pentode electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

High-mu triode plus sharp-cutoff pentode used in television IF, sync-separator, and voltage-amplifier applications.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9QP	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

9QP - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	150000 Ω
TRANSCONDUCTANCE	0.01 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	2.5 W
MAXIMUM SCREEN DISSIPATION	0.55 W
<i>Representative electrical section from supplied RCA data sheet.</i>	

SECTION2 Triode	
PLATE RESISTANCE	31500 Ω
TRANSCONDUCTANCE	0.0032 S
AMPLIFICATION FACTOR	100
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	1 W
<i>Representative electrical section from supplied RCA data sheet.</i>	

High-mu triode plus sharp-cutoff pentode used in television IF, sync-separator, and voltage-amplifier applications.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1965 Westinghouse Data Book

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

1965 WESTINGHOUSE DATA BOOK

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	330 V	—
Maximum Plate Dissipation	2.5 W	—
Maximum Screen Supply Voltage	330 V	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-Plate Capacitance	0.03 pF	ShieldedOrMaximum
Input Capacitance	1.5 pF	—
Output Capacitance	2.8 pF	—

1965 WESTINGHOUSE DATA BOOK

Section 2 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	600 mA	—
Amplification Factor	100 ratio	—
Grid-Plate Capacitance	3 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	330 V	—
Maximum Plate Dissipation	1 W	—

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1968 General Electric Co

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

1968 GENERAL ELECTRIC CO

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	330 V	—
Maximum Screen Supply Voltage	330 V	—
Maximum Plate Dissipation	2.5 W	—
Maximum Screen Dissipation	0.55 W	—
Typical Plate Voltage	125 V	—
Typical Screen Voltage	125 V	—
Typical Grid1 Voltage	-1 V	—
Typical Plate Current	12 mA	—
Typical Screen Current	4.5 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	150000 ohm	—
Transconductance	10000 uS	—

1968 GENERAL ELECTRIC CO

Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	330 V	—
Maximum Plate Dissipation	1 W	—
Typical Plate Voltage	250 V	—
TypicalGridVoltage	-2 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Plate Current	1.8 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification Factor	100	—
Plate Resistance	31500 ohm	—
Transconductance	3200 uS	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage nominal	6.3 V	—
Heater current	600 mA	—
Plate Voltage	330 V	Published source row
Plate Voltage (value 2)	330 V	Published source row
Grid-No	2 V	Published source row
Grid-No (value 2)	330 V	Published source row
Grid-No	2 A	Published source row
Grid-No	1	Published source row
Grid-No	2	Published source row
For grid-No	2	Published source row
For grid-No	2	Published source row
Plate Dissipation	1 W	Published source row
Plate Dissipation (value 2)	2.5 W	Published source row
No	3	Published source row
No (value 2)	20	Published source row

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC)	0.6 V	Published table column
Current at heater volts =	0 V	Published table column

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	250 V	Published source row
Plate Voltage (value 2)	125 V	Published source row
Grid-No	2 V	Published source row
Grid-No (value 2)	125 V	Published source row
Grid-No	1 V	Published source row
Grid-No (value 2)	-2 V	Published source row
Grid-No (value 3)	-1 V	Published source row
Plate Resistance (Approx)	31500 ohm	Published source row
Plate Resistance (Approx) (value 2)	150000 ohm	Published source row
Transconductance	3200 μ S	Published source row
Transconductance (value 2)	10000 μ S	Published source row
Plate Current	1.8 mA	Published source row
Plate Current (value 2)	12 mA	Published source row
Grid-No	2 mA	Published source row
Grid-No (value 2)	4.5 mA	Published source row
Grid-No	1	Published source row

1971 RCA HB3 BINDER 5 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	Promoted field corroboration
Maximum plate dissipation	1 W	Promoted field corroboration

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC)	6.3 V	Published table column
Current at heater volts =	6.3 V	Published table column
Plate resistance	31500 ohm	Promoted field corroboration
Transconductance	3200 μ S	Promoted field corroboration



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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Supply Voltage 125	170 V	Published in approved 6KT8 target datasheet entry; Section2
Grid-No.3 Voltage 0	0 V	Published in approved 6KT8 target datasheet entry; Section2
Grid-No.2 Supply Voltage 125	170 V	Published in approved 6KT8 target datasheet entry; Section2
Cathode-Bias Resistor 56	56 Ω	Published in approved 6KT8 target datasheet entry; Section2
Plate Current	17 mA	Published in approved 6KT8 target datasheet entry; Section2
of 10 jurahos –	22 V	Published in approved 6KT8 target datasheet entry; Section2
Grid-No. 1 Voltage –2	-1 V	Published in approved 6KT8 target datasheet entry; Section2
Plate Resistance (Approx.) 31500	150000 Ω	Published in approved 6KT8 target datasheet entry; Section2
Transconductance 3200	10000 μ S	Published in approved 6KT8 target datasheet entry; Section2
Plate Current 1.8	12 mA	Published in approved 6KT8 target datasheet entry; Section2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.2 Current	4.5 mA	Published in approved 6KT8 target datasheet entry; Section2
20 M -3.5	-7 V	Published in approved 6KT8 target datasheet entry; Section2

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc)	6.3 V	Published in approved 6KT8 target datasheet entry; Section2
Heater Current 0	-6 A	Published in approved 6KT8 target datasheet entry; Section2
Plate Voltage 330	330 V	Published in approved 6KT8 target datasheet entry; Section2
Grid-No.2 (Screen-Grid) Supply Voltage	330 V	Published in approved 6KT8 target datasheet entry; Section2
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0 V	Published in approved 6KT8 target datasheet entry; Section2
Plate Dissipation	2.5 W	Published in approved 6KT8 target datasheet entry; Section2
For grid-No.2 voltages up to	165 V	Published in approved 6KT8 target datasheet entry; Section2
For grid-No.2 voltages between 165 and	330 V	Published in approved 6KT8 target datasheet entry; Section2
Plate Voltage 250	125 V	Published in approved 6KT8 target datasheet entry; Section2
Grid-No. 2 Voltage	125 V	Published in approved 6KT8 target datasheet entry; Section2
For fixed-bias operation 0.5	0.5 MΩ	Published in approved 6KT8 target datasheet entry; Section2
For cathode-bias operation 1	1 MΩ	Published in approved 6KT8 target datasheet entry; Section2

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate 3	3 pF	Published in approved 6KT8 target datasheet entry; Section2
Pentode Unit, and Internal Shield 3.2	3.2 pF	Published in approved 6KT8 target datasheet entry; Section2
Peniode Unit, and Internal Shield 1.6	2.4 pF	Published in approved 6KT8 target datasheet entry; Section2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.3, and Internal Shield 7.5	7.5 pF	Published in approved 6KT8 target datasheet entry; Section2
Grid No.3, and Internal Shield 2.2	2.8 pF	Published in approved 6KT8 target datasheet entry; Section2

1975 RCA RC30

Section 2 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Supply Voltage 125	170 V	Published in approved 6KT8 target datasheet entry; Section1
Grid-No.3 Voltage 0	0 V	Published in approved 6KT8 target datasheet entry; Section1
Grid-No.2 Supply Voltage 125	170 V	Published in approved 6KT8 target datasheet entry; Section1
Cathode-Bias Resistor 56	56 Ω	Published in approved 6KT8 target datasheet entry; Section1
Plate Current	17 mA	Published in approved 6KT8 target datasheet entry; Section1
of 10 jurahos –	22 V	Published in approved 6KT8 target datasheet entry; Section1
Grid-No. 1 Voltage –2	-1 V	Published in approved 6KT8 target datasheet entry; Section1
Plate Resistance (Approx.) 31500	150000 Ω	Published in approved 6KT8 target datasheet entry; Section1
Transconductance 3200	10000 μS	Published in approved 6KT8 target datasheet entry; Section1
Plate Current 1.8	12 mA	Published in approved 6KT8 target datasheet entry; Section1
Grid-No.2 Current	4.5 mA	Published in approved 6KT8 target datasheet entry; Section1
20 M –3.5	-7 V	Published in approved 6KT8 target datasheet entry; Section1

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc)	6.3 V	Published in approved 6KT8 target datasheet entry; Section1
Heater Current 0	-6 A	Published in approved 6KT8 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage 330	330 V	Published in approved 6KT8 target datasheet entry; Section1
Grid-No.2 (Screen-Grid) Supply Voltage	330 V	Published in approved 6KT8 target datasheet entry; Section1
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0 V	Published in approved 6KT8 target datasheet entry; Section1
Plate Dissipation	2.5 W	Published in approved 6KT8 target datasheet entry; Section1
For grid-No.2 voltages up to	165 V	Published in approved 6KT8 target datasheet entry; Section1
For grid-No.2 voltages between 165 and	330 V	Published in approved 6KT8 target datasheet entry; Section1
Plate Voltage 250	125 V	Published in approved 6KT8 target datasheet entry; Section1
Grid-No. 2 Voltage	125 V	Published in approved 6KT8 target datasheet entry; Section1
For fixed-bias operation 0.5	0.5 MΩ	Published in approved 6KT8 target datasheet entry; Section1
For cathode-bias operation 1	1 MΩ	Published in approved 6KT8 target datasheet entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate 3	3 pF	Published in approved 6KT8 target datasheet entry; Section1
Pentode Unit, and Internal Shield 3.2	3.2 pF	Published in approved 6KT8 target datasheet entry; Section1
Peniode Unit, and Internal Shield 1.6	2.4 pF	Published in approved 6KT8 target datasheet entry; Section1
Grid No.3, and Internal Shield 7.5	7.5 pF	Published in approved 6KT8 target datasheet entry; Section1
Grid No.3, and Internal Shield 2.2	2.8 pF	Published in approved 6KT8 target datasheet entry; Section1

TUBE TINKER

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