

ELECTRONIC TUBE REFERENCE

6KT6

Voltage - Pentode Remote Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Semi-remote-cutoff frame-grid pentode designed for television IF amplification around 40 MHz. Frame-grid construction provides high transconductance while the controlled cutoff characteristic enables automatic gain regulation.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9PM	BASE PINS	9
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

9PM - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	160000 Ω
TRANSCONDUCTANCE	0.018 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	3.1 W
MAXIMUM SCREEN DISSIPATION	0.6 W
<i>Representative electrical section from supplied RCA data sheet.</i>	

Semiremote-cutoff frame-grid pentode used as an IF-amplifier tube in television receivers around 40 MHz.

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	300 mA	—
DC Plate Voltage Eb	330 V	Published source row
Voltage Ec3	0 V	Published source row
DC Grid-No	2	Published source row
Supply Voltage E c2	330 V	Published source row
DC Grid-No	2	Published source row
DC Grid-No (value 2)	2	Published source row
DC Grid-No. 1 (Control-Grid) Voltage. Ec1	0 V	Published source row
Heater Voltage (AC or DC) ~h	5.7 V	Published source row
Heater Voltage (AC or DC) ~h (value 2)	6.9 V	Published source row
Grid-No	2	Published source row
Plate Dissipation Pb	3 W	Published source row
Plate Dissipation Pb (value 2)	1 W	Published source row

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (AC or DC) Eh	6.3 V	Published source row
^~ Heater Current Ih	300 mA	Published source row
Plate Resistance (Approx.) rp	160	Published source row
Transconductance gm	18000 μS	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Plate Current Ib	17 mA	Published source row
DC Grid-No	2 mA	Published source row
DC Grid-No (value 2)	4.2 mA	Published source row
Cutoff DC Grid-No. 1 Voltage Ecl(co)	-22 V	Published source row
DC Plate Supply Voltage Ebb	125 V	Published source row
DC Plate Supply Voltage Ebb (value 2)	170 V	Published source row
DC Grid-No	3 V	Published source row
DC Grid-No (value 2)	0 V	Published source row
DC Grid-No (value 3)	0 V	Published source row
DC Grid-No	2 V	Published source row
DC Grid-No (value 2)	125 V	Published source row
DC Grid-No (value 3)	170 V	Published source row
Cathode Resistor Rk	56	Published source row
Cathode Resistor Rk (value 2)	56	Published source row
DC GRID-No	3	Published source row
DC GRID-No	2 V	Published source row
DC GRID-No (value 2)	126 V	Published source row
PLATE (Ip) OR GRID -No	2 mA	Published source row
DC PLATE VOLTAGE (Ey)•	125 V	Published source row
DC GRID-No	3 V	Published source row
DC GRID-No (value 2)	3 V	Published source row
DC GRID-No (value 3)	0 V	Published source row
DC GRID-No	2 V	Published source row
DC GRID-No (value 2)	125 V	Published source row

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No	1 pF	Published source row
Grid No (value 2)	0.019 pF	Published source row

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
For fixed-bias operation 0.5	0.5 MΩ	Published in approved 6KT6 target datasheet entry; Section1
For cathode-bias operation 1	1 MΩ	Published in approved 6KT6 target datasheet entry; Section1
quency in the order of	40 MHz	Published in approved 6KT6 target datasheet entry; Section1
Heater Voltage (ac/dc) 3.5 4.5	6.3 V	Published in approved 6KT6 target datasheet entry; Section1
Heater Current 0.6 0.45	300 mA	Published in approved 6KT6 target datasheet entry; Section1
Heater Warm-up Time (Average) 11	11 seconds	Published in approved 6KT6 target datasheet entry; Section1
Plate Voltage	330 V	Published in approved 6KT6 target datasheet entry; Section1
Grid-No.3 (Suppressor-Grid) Voltage	0 V	Published in approved 6KT6 target datasheet entry; Section1
Grid-No.2 (Screen-Grid) Supply Voltage	330 V	Published in approved 6KT6 target datasheet entry; Section1
Grid-No.1 (Control-Grid) Voltage	0 V	Published in approved 6KT6 target datasheet entry; Section1
Plate Dissipation	3.1 W	Published in approved 6KT6 target datasheet entry; Section1
For grid-No.2 voltages up to	165 V	Published in approved 6KT6 target datasheet entry; Section1
For grid-No.2 voltages up to 165 volts	0.6 W	Published in approved 6KT6 target datasheet entry; Section1
For grid-No.2 voltages between 165 and	330 V	Published in approved 6KT6 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc)	6.3 V	Published in approved 6KT6 target datasheet entry; Section1
Heater Current 0	-6 A	Published in approved 6KT6 target datasheet entry; Section1
Plate Voltage 330	330 V	Published in approved 6KT6 target datasheet entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Internal Shield	9.5 pF	Published in approved 6KT6 target datasheet entry; Section1
Grid to Plate 3	3 pF	Published in approved 6KT6 target datasheet entry; Section1
Pentode Unit, and Internal Shield 3.2	3.2 pF	Published in approved 6KT6 target datasheet entry; Section1
Peniode Unit, and Internal Shield 1.6	2.4 pF	Published in approved 6KT6 target datasheet entry; Section1
Grid No.3, and Internal Shield 7.5	7.5 pF	Published in approved 6KT6 target datasheet entry; Section1
Grid No.3, and Internal Shield 2.2	2.8 pF	Published in approved 6KT6 target datasheet entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Supply Voltage 125	170 V	Published in approved 6KT6 target datasheet entry; Section1
Grid-No.3 Voltage 0	0 V	Published in approved 6KT6 target datasheet entry; Section1
Grid-No.2 Supply Voltage 125	170 V	Published in approved 6KT6 target datasheet entry; Section1
Cathode-Bias Resistor 56	56 Ω	Published in approved 6KT6 target datasheet entry; Section1
Plate Current	17 mA	Published in approved 6KT6 target datasheet entry; Section1
of 10 jurahos –	22 V	Published in approved 6KT6 target datasheet entry; Section1

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes, and their source documents.

