



ELECTRONIC TUBE REFERENCE

6KV8

Power - Pentode (NOT beam) electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

High-mu triode plus frame-grid sharp-cutoff pentode for television receivers. The triode handles voltage, sync, or sound-IF functions while the pentode provides high-transconductance video output.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9DX	BASE PINS	9
NOMINAL HEATER	6.3 V / 775 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

9DX - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	17500 Ω
TRANSCONDUCTANCE	0.004 S
AMPLIFICATION FACTOR	70
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	1 W
<i>Representative electrical section from supplied RCA data sheet.</i>	

SECTION2 Pentode	
PLATE RESISTANCE	75000 Ω
TRANSCONDUCTANCE	0.023 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	5 W
MAXIMUM SCREEN DISSIPATION	1 W
<i>Representative electrical section from supplied RCA data sheet.</i>	

High-mu triode plus frame-grid sharp-cutoff pentode; triode for voltage/sync/sound-IF service and pentode for television video output.

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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage nominal	6.3 V	—
Heater current	775 mA	—
Maximum plate voltage	300 V	Promoted field corroboration

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage I; ₁ C or	6 V	Published table column
Current at heat~'~r vol±~ = t	3 A	Published table column
Plate resistance	17500 ohm	Promoted field corroboration
Transconductance	4000 μS	Promoted field corroboration
Amplification factor	70	Promoted field corroboration

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Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage nominal	6.3 V	—
Heater current	775 mA	—
Plate Voltage	300 V	Published source row
Plate Voltage (value 2)	300 V	Published source row
Grid-No	2 V	Published source row
Grid-No (value 2)	300 V	Published source row
Grid-No	2	Published source row
Grid-No (value 2)	2	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No	2	Published source row
For grid-No	2 V	Published source row
For grid-No (value 2)	15 V	Published source row
For grid-No	2	Published source row
For grid-No (value 2)	150	Published source row
and	300 V	Published source row
and (value 2)	2 V	Published source row
Plate Dissipation I	5 W	Published source row

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage I; _{~C} or	3 V	Published table column
Current at heat~'~r vol±~ = t	775 mA	Published table column
Plate Supply Voltage	125 V	Published source row
Plate Supply Voltage (value 2)	200 V	Published source row
Plate Voltage	200 V	Published source row
Grid-No	2 V	Published source row
Grid-No (value 2)	125 V	Published source row
Grid-No (value 3)	125 V	Published source row
Grid-No. 1 Supply Voltage	-2 V	Published source row
Cathode Resistor	82	Published source row
Cathode Resistor (value 2)	68	Published source row
Cathode Resistor (value 3)	2	Published source row
Plate Resistance (Approx)	17500	Published source row
Plate Resistance (Approx) (value 2)	55000	Published source row
Plate Resistance (Approx) (value 3)	75000	Published source row
Transconductance	4000	Published source row
Transconductance (value 2)	21000	Published source row
Transconductance (value 3)	23000	Published source row
i^ Plate Current	4 mA	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
i [^] Plate Current (value 2)	16.5 mA	Published source row
i [^] Plate Current (value 3)	20 mA	Published source row
Grid-No	2 mA	Published source row
Grid-No (value 2)	3 mA	Published source row
Grid-No (value 3)	1 mA	Published source row
for plate current =	100 A	Published source row
for plate current = (value 2)	-4.5 A	Published source row
for plate current = (value 3)	-4.2 A	Published source row
GRID-No	2 V	Published source row
GRID-No (value 2)	12 V	Published source row
PLATE (Iyl OR GRID-No	2	Published source row
GRID-No	2 V	Published source row
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)	0.12 pF	Published source row
Grid No	1	Published source row
Grid No (value 2)	3	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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
• Plate dissipations up to	32 W	Published in approved 6KV8 target datasheet entry; Section1
Plate Voltage 300	300 V	Published in approved 6KV8 target datasheet entry; Section1
Grid-No.1 (Control-Grid) Voltage, Positive-bias value 0	0 V	Published in approved 6KV8 target datasheet entry; Section1
Plate Dissipation 1	5 W	Published in approved 6KV8 target datasheet entry; Section1
For Grid-No.2 voltages up to	150 V	Published in approved 6KV8 target datasheet entry; Section1
For Grid-No.2 voltages between 150 and	300 V	Published in approved 6KV8 target datasheet entry; Section1
For fixed-bias operation 0.5	0.1 MΩ	Published in approved 6KV8 target datasheet entry; Section1
For cathode-bias operation 1	0.25 MΩ	Published in approved 6KV8 target datasheet entry; Section1
CM GRID -No	2 V	Published in approved 6KV8 target datasheet entry; Section1
Heater Voltage (ac/dc) 6.3	15 V	Published in approved 6KV8 target datasheet entry; Section1
Heater Current 1.1	450 mA	Published in approved 6KV8 target datasheet entry; Section1
Heater Warm-up Time (Average)	11 seconds	Published in approved 6KV8 target datasheet entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) 6.3	10.9 V	Published in approved 6KV8 target datasheet entry; Section1
Heater Current 0.775	450 mA	Published in approved 6KV8 target datasheet entry; Section1
Heater Warm-up Time (Average)	11 seconds	Published in approved 6KV8 target datasheet entry; Section1
Grid to Plate	3.7 pF	Published in approved 6KV8 target datasheet entry; Section1
and Internal Shield	2.5 pF	Published in approved 6KV8 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Supply Voltage 200 125	200 V	Published in approved 6KV8 target datasheet entry; Section1
Grid-No.2 Supply Voltage 125	125 V	Published in approved 6KV8 target datasheet entry; Section1
82	68 Ω	Published in approved 6KV8 target datasheet entry; Section1
17500 55000	75000 Ω	Published in approved 6KV8 target datasheet entry; Section1
4 16.5	20 mA	Published in approved 6KV8 target datasheet entry; Section1
3.1	3.5 mA	Published in approved 6KV8 target datasheet entry; Section1
100 /1A -4.5 - 4.2	-4.2 V	Published in approved 6KV8 target datasheet entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
and Internal Shield	2.4 pF	Published in approved 6KV8 target datasheet entry; Section1
Internal Shield	13 pF	Published in approved 6KV8 target datasheet entry; Section1
Internal Shield	4.8 pF	Published in approved 6KV8 target datasheet entry; Section1

1975 RCA RC30

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
• Plate dissipations up to	32 W	Published in approved 6KV8 target datasheet entry; Section2
Plate Voltage 300	300 V	Published in approved 6KV8 target datasheet entry; Section2
Grid-No.1 (Control-Grid) Voltage, Positive-bias value 0	0 V	Published in approved 6KV8 target datasheet entry; Section2
Plate Dissipation 1	5 W	Published in approved 6KV8 target datasheet entry; Section2
For Grid-No.2 voltages up to	150 V	Published in approved 6KV8 target datasheet entry; Section2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For Grid-No.2 voltages between 150 and	300 V	Published in approved 6KV8 target datasheet entry; Section2
For fixed-bias operation 0.5	0.1 MΩ	Published in approved 6KV8 target datasheet entry; Section2
For cathode-bias operation 1	0.25 MΩ	Published in approved 6KV8 target datasheet entry; Section2
CM GRID -No	2 V	Published in approved 6KV8 target datasheet entry; Section2
Heater Voltage (ac/dc) 6.3	15 V	Published in approved 6KV8 target datasheet entry; Section2
Heater Current 1.1	450 mA	Published in approved 6KV8 target datasheet entry; Section2
Heater Warm-up Time (Average)	11 seconds	Published in approved 6KV8 target datasheet entry; Section2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) 6.3	10.9 V	Published in approved 6KV8 target datasheet entry; Section2
Heater Current 0.775	450 mA	Published in approved 6KV8 target datasheet entry; Section2
Heater Warm-up Time (Average)	11 seconds	Published in approved 6KV8 target datasheet entry; Section2
Grid to Plate	3.7 pF	Published in approved 6KV8 target datasheet entry; Section2
and Internal Shield	2.5 pF	Published in approved 6KV8 target datasheet entry; Section2
Plate Supply Voltage 200 125	200 V	Published in approved 6KV8 target datasheet entry; Section2
Grid-No.2 Supply Voltage 125	125 V	Published in approved 6KV8 target datasheet entry; Section2
82	68 Ω	Published in approved 6KV8 target datasheet entry; Section2
17500 55000	75000 Ω	Published in approved 6KV8 target datasheet entry; Section2
4 16.5	20 mA	Published in approved 6KV8 target datasheet entry; Section2
3.1	3.5 mA	Published in approved 6KV8 target datasheet entry; Section2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
100 /1A -4.5 – 4.2	-4.2 V	Published in approved 6KV8 target datasheet entry; Section2

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
and Internal Shield	2.4 pF	Published in approved 6KV8 target datasheet entry; Section2
Internal Shield	13 pF	Published in approved 6KV8 target datasheet entry; Section2
Internal Shield	4.8 pF	Published in approved 6KV8 target datasheet entry; Section2

TUBE TINKER

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