

ELECTRONIC TUBE REFERENCE

6LQ8

Power - Pentode (NOT beam) electronic tube

CONSOLIDATED TECHNICAL DATA
2 SECTIONS
CONSTRUCTION
PENTODE-TRIODE

Medium-mu triode plus sharp-cutoff pentode for television receivers. The pentode provides video output while the triode serves sync-separator and sound-IF functions.

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	4400 Ω
TRANSCONDUCTANCE	0.0104 S
AMPLIFICATION FACTOR	46
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	2 W
<i>Published promoted values applied where applicable; additional ratings, characteristics, and operating data retained as parameters.</i>	

SECTION2 Pentode	
PLATE RESISTANCE	55000 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>Published promoted values applied where applicable; additional ratings, characteristics, and operating data retained as parameters.</i>	

Medium-mu triode and sharp-cutoff pentode for television receivers; pentode is used as a video output tube and triode in sync-separator and sound-IF circuits.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1964 RMA EIA

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

1964 RMA EIA

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	775 mA	—
Plate Voltage	125 V	—
Grid Voltage	—	—
Plate Current	15 mA	—
Amplification Factor	46	—
Plate Resistance	4400 ohm	—
Transconductance	10400 uS	—
Grid To Plate Capacitance	2.8 pF	—
Input Capacitance	4.2 pF	—
Output Capacitance	2.4 pF	—

1964 RMA EIA

Section 2 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	125 V	—
Screen Voltage	125 V	—
Grid Voltage	—	—
Plate Current	16.5 mA	—
Screen Current	3.1 mA	—
Plate Resistance	75000 ohm	—
Transconductance	21000 uS	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid To Plate Capacitance	0.12 pF	—
Input Capacitance	14 pF	—
Output Capacitance	4.8 pF	—
FrameGridConstruction	1 boolean	—
Application	Video output	LowBPlusTelevision



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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (AC or DC)	6.3 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater Current	0.775	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid to plate	2.8 pF	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Resistance (Approx.) – published value 1	4400	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Resistance (Approx.) – published value 2	55000	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Resistance (Approx.) – published value 3	75000	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Resistance (Approx.) – published value 4	2	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance – published value 1	10400	Published datasheet value; multiple values represent separate source-table limits or conditions.
Transconductance – published value 2	21000	Published datasheet value; multiple values represent separate source-table limits or conditions.
Transconductance – published value 3	23000	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Plate Current – published value 1	15 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Plate Current – published value 2	16.5 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Plate Current – published value 3	20 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No.2 Current – published value 1	3 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No.2 Current – published value 2	1 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No.2 Current – published value 3	3.5 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Cutoff DC Grid-No. 1 Voltage – published value 1	-6 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Cutoff DC Grid-No. 1 Voltage – published value 2	-4.2 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Cutoff DC Grid-No. 1 Voltage – published value 3	-4.2 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate $\mu A = 1C0$	1	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Plate Supply Voltage – published value 1	125 V	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Plate Supply Voltage – published value 2	125 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Plate Supply Voltage – published value 3	200 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No.2 Supply Voltage • – published value 1	125 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No.2 Supply Voltage • – published value 2	125 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Cathode Resistor – published value 1	68	Published datasheet value; multiple values represent separate source-table limits or conditions.
Cathode Resistor – published value 2	82	Published datasheet value; multiple values represent separate source-table limits or conditions.
Cathode Resistor – published value 3	68	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 1 -Triode Cathode	1	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 2 -Triode Grid	2	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 3-Triode Plate	3	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 4 -Heater	4	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 5 -Heater	5	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Plate Voltage – published value 1	300 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Plate Voltage – published value 2	300 V	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Supply Voltage	300 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Positive-bias value – published value 1	0	Published datasheet value; multiple values represent separate source-table limits or conditions.
Positive-bias value – published value 2	0	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater Voltage (AC or DC) – published value 1	5.7 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater Voltage (AC or DC) – published value 2	6.9 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
For $E_{c2} > 150 \text{ V}$ and $< 300 \text{ V}$ – published value 1	150	Published datasheet value; multiple values represent separate source-table limits or conditions.
For $E_{c2} > 150 \text{ V}$ and $< 300 \text{ V}$ – published value 2	300	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Dissipation – published value 1	2	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Dissipation – published value 2	5	Published datasheet value; multiple values represent separate source-table limits or conditions.
For fixed-bias operation – published value 1	0.5	Published datasheet value; multiple values represent separate source-table limits or conditions.
For fixed-bias operation – published value 2	0.1	Published datasheet value; multiple values represent separate source-table limits or conditions.
For fixed-bias operation – published value 3	1	Published datasheet value; multiple values represent separate source-table limits or conditions.
Far cathode-bias operation	0.25	Published datasheet value; multiple values represent separate source-table limits or conditions.
PLATE VOLTS~200	200 V	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GRID-No.2 VOLTS=125	125 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
GRID-No.2 VOLTS'125	125 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
PLATE (I _y) OR GRID-No.2 (I _{~2}) MILLIAMPERES	2 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to plate – published value 1	1 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid No.1 to plate – published value 2	0.12 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.

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Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode grid to pentode Glate	0.015 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pentode plate to triode plate – published value 1	0 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pentode plate to triode plate – published value 2	17 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pin 6- Pentode Grid No.3,	6	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 7- Pentode Grid No.1	7	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pin 8- Pentode Grid No.2	8	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 9 - Pentode Plate	9	Published datasheet value; multiple values represent separate source-table limits or conditions.



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	6.3 V	Nominal
Heater Current	700 mA	Nominal
Plate Supply Voltage	125 V	ClassA
Cathode-Bias Resistor	68 ohm	ClassA
Plate Current	15 mA	ClassA

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-Plate Capacitance	2.8 pF	—
Grid Input Capacitance	4.2 pF	—
Plate Output Capacitance	2.4 pF	—

1975 RCA RC30

Section 2 · Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1-to-Plate Capacitance	0.12 pF	—
Grid No.1 Input Capacitance	14 pF	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Output Capacitance	4.8 pF	—
Triode Grid-to-Pentode Plate Capacitance	0.015 pF	—
Pentode Plate-to-Triode Plate Capacitance	0.17 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Supply Voltage	200 V	ClassA
Screen Supply Voltage	125 V	ClassA
Cathode-Bias Resistor	68 ohm	ClassA
Plate Current	20 mA	ClassA
Screen Current	3.5 mA	ClassA

TUBE TINKER

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