

ELECTRONIC TUBE REFERENCE

6LR8

Power - TV Vertical Output electronic tube

CONSOLIDATED TECHNICAL DATA
2 SECTIONS
CONSTRUCTION
BEAMPOWER-TRIODE

Multi-section television tube incorporating a beam-power section intended for vertical-deflection output, paired with a small-signal section for oscillator or driver functions.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9QT	BASE PINS	9
NOMINAL HEATER	6.3 V / 1.5 A	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

9QT - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	16000 Ω
TRANSCONDUCTANCE	0.0036 S
AMPLIFICATION FACTOR	58
MAXIMUM PLATE VOLTAGE	400 V
MAXIMUM PLATE DISSIPATION	2.5 W
MAXIMUM CATHODE CURRENT	30 mA
<i>Vertical-deflection oscillator triode unit.</i>	

SECTION2 Beam Power	
PLATE RESISTANCE	12000 Ω
TRANSCONDUCTANCE	0.0093 S
AMPLIFICATION FACTOR	6.5
MAXIMUM PLATE VOLTAGE	400 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	14 W
MAXIMUM SCREEN DISSIPATION	2.75 W
MAXIMUM CATHODE CURRENT	75 mA
<i>Vertical-deflection amplifier beam-power unit.</i>	

High-mu triode plus beam-power section used as a combined vertical-deflection oscillator and amplifier in television receivers.

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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	400 V	—
Maximum Plate Dissipation	2.5 W	—
Maximum Cathode Current	30 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	16000 ohm	—
Transconductance	3600 uS	—
Amplification Factor	58	—
Interelectrode Capacitances Published	true	—

1968 GENERAL ELECTRIC CO

Section 2 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	400 V	—
Maximum Screen Voltage	300 V	—
Maximum Plate Dissipation	14 W	—
Maximum Screen Dissipation	2.75 W	—
Maximum Cathode Current	75 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	12000 ohm	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	9300 μ S	—
Amplification Factor	6.5	—
Interelectrode Capacitances Published	true	—



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
Heater Voltage 6.3 21	31.5 V	Published in approved 31LR8 target datasheet entry; Section1
Heater Current 1.5 0.45	300 mA	Published in approved 31LR8 target datasheet entry; Section1
Heater Warm-up Time . 11	11 seconds	Published in approved 31LR8 target datasheet entry; Section1
Flate Voltage 400	400 V	Published in approved 31LR8 target datasheet entry; Section1
Grid-No.2 Voltage	300 V	Published in approved 31LR8 target datasheet entry; Section1
Peak Cathode Current 105	260 mA	Published in approved 31LR8 target datasheet entry; Section1
Average Cathode Current 30	75 mA	Published in approved 31LR8 target datasheet entry; Section1
Plate Dissipation!: 2.5	14 W	Published in approved 31LR8 target datasheet entry; Section1
# Pulse duration must not exceed 15% of a horizontal scanning cycle (	10 microseconds	Published in approved 31LR8 target datasheet entry; Section1
Heater Voltage 6.3 8.1	11.4 V	Published in approved 31LR8 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Current 0.6 0.45	315 mA	Published in approved 31LR8 target datasheet entry; Section1
Heater Warm-up Time (Average) 11 11	11 seconds	Published in approved 31LR8 target datasheet entry; Section1
Plate Voltage	330 V	Published in approved 31LR8 target datasheet entry; Section1
Grid-No.2 (Screen-Grid) Supply Voltage	330 V	Published in approved 31LR8 target datasheet entry; Section1
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0 V	Published in approved 31LR8 target datasheet entry; Section1
Plate Dissipation	3.1 W	Published in approved 31LR8 target datasheet entry; Section1
For grid-No 2 voltages up to	165 V	Published in approved 31LR8 target datasheet entry; Section1
For grid-No 2 voltages up to 165 volts	0.65 W	Published in approved 31LR8 target datasheet entry; Section1
For grid-No.2 voltages between 165 and	33 V	Published in approved 31LR8 target datasheet entry; Section1
Plate Voltage	125 V	Published in approved 31LR8 target datasheet entry; Section1
Grid-No.2 Voltage	125 V	Published in approved 31LR8 target datasheet entry; Section1
Cathode-Bias Resistor	56 Ω	Published in approved 31LR8 target datasheet entry; Section1
Plate Resistance (Approx.)	200000 Ω	Published in approved 31LR8 target datasheet entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage 250 45 135	120 V	Published in approved 31LR8 target datasheet entry; Section1
Grid-No.1 (Control-Grid) Voltage -4 0 -10	-10 V	Published in approved 31LR8 target datasheet entry; Section1
Plate Resistance Approx.) 14000	14000 Ω	Published in approved 31LR8 target datasheet entry; Section1
Plate Current 2.S 200	51 mA	Published in approved 31LR8 target datasheet entry; Section1
For plate current of	1 mA	Published in approved 31LR8 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	13000 μS	Published in approved 31LR8 target datasheet entry; Section1
Plate Current	10 mA	Published in approved 31LR8 target datasheet entry; Section1
Grid-No.2 Current	3.4 mA	Published in approved 31LR8 target datasheet entry; Section1
Grid-No.1 Voltage (Approx.) for plate current of 20 /1A	-3.5 V	Published in approved 31LR8 target datasheet entry; Section1

1975 RCA RC30

Section 2 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage 6.3 21	31.5 V	Published in approved 31LR8 target datasheet entry; Section2
Heater Current 1.5 0.45	300 mA	Published in approved 31LR8 target datasheet entry; Section2
Heater Warm-up Time . 11	11 seconds	Published in approved 31LR8 target datasheet entry; Section2
Flate Voltage 400	400 V	Published in approved 31LR8 target datasheet entry; Section2
Grid-No.2 Voltage	300 V	Published in approved 31LR8 target datasheet entry; Section2
Peak Cathode Current 105	260 mA	Published in approved 31LR8 target datasheet entry; Section2
Average Cathode Current 30	75 mA	Published in approved 31LR8 target datasheet entry; Section2
Plate Dissipation!: 2.5	14 W	Published in approved 31LR8 target datasheet entry; Section2
# Pulse duration must not exceed 15% of a horizontal scanning cycle (	10 microseconds	Published in approved 31LR8 target datasheet entry; Section2
Heater Voltage 6.3 8.1	11.4 V	Published in approved 31LR8 target datasheet entry; Section2
Heater Current 0.6 0.45	315 mA	Published in approved 31LR8 target datasheet entry; Section2
Heater Warm-up Time (Average) 11 11	11 seconds	Published in approved 31LR8 target datasheet entry; Section2
Plate Voltage	330 V	Published in approved 31LR8 target datasheet entry; Section2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.2 (Screen-Grid) Supply Voltage	330 V	Published in approved 31LR8 target datasheet entry; Section2
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0 V	Published in approved 31LR8 target datasheet entry; Section2
Plate Dissipation	3.1 W	Published in approved 31LR8 target datasheet entry; Section2
For grid-No 2 voltages up to	165 V	Published in approved 31LR8 target datasheet entry; Section2
For grid-No 2 voltages up to 165 volts	0.65 W	Published in approved 31LR8 target datasheet entry; Section2
For grid-No.2 voltages between 165 and	33 V	Published in approved 31LR8 target datasheet entry; Section2
Plate Voltage	125 V	Published in approved 31LR8 target datasheet entry; Section2
Grid-No.2 Voltage	125 V	Published in approved 31LR8 target datasheet entry; Section2
Cathode-Bias Resistor	56 Ω	Published in approved 31LR8 target datasheet entry; Section2
Plate Resistance (Approx.)	200000 Ω	Published in approved 31LR8 target datasheet entry; Section2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage 250 45 135	120 V	Published in approved 31LR8 target datasheet entry; Section2
Grid-No.1 (Control-Grid) Voltage -4 0 -10	-10 V	Published in approved 31LR8 target datasheet entry; Section2
Plate Resistance Approx.) 14000	14000 Ω	Published in approved 31LR8 target datasheet entry; Section2
Plate Current 2.S 200	51 mA	Published in approved 31LR8 target datasheet entry; Section2
For plate current of	1 mA	Published in approved 31LR8 target datasheet entry; Section2
Transconductance	13000 μS	Published in approved 31LR8 target datasheet entry; Section2
Plate Current	10 mA	Published in approved 31LR8 target datasheet entry; Section2
Grid-No.2 Current	3.4 mA	Published in approved 31LR8 target datasheet entry; Section2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.1 Voltage (Approx.) for plate current of 20 /1A	-3.5 V	Published in approved 31LR8 target datasheet entry; Section2

TUBE TINKER

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and their source documents.

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