



ELECTRONIC TUBE REFERENCE

6LT8

Voltage Pentode or Tetrode (with diode) electronic tube

CONSOLIDATED TECHNICAL DATA

3 SECTIONS

CONSTRUCTION

DIODE-DIODE-PENTODE

Television diode-pentode combining IF amplification with video detection, allowing the pentode to provide wideband gain while the diode recovers the detected picture signal.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9RL	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

9RL - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	200000 Ω
TRANSCONDUCTANCE	0.013 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	3.1 W
MAXIMUM SCREEN DISSIPATION	0.65 W
<i>Sharp-cutoff pentode unit used as Class A amplifier/horizontal oscillator.</i>	

SECTION2 Diode	
MAXIMUM CATHODE CURRENT	5 mA
<i>Diode unit 1; continuous plate-current maximum 5 mA.</i>	

SECTION3 Diode	
MAXIMUM CATHODE CURRENT	5 mA
<i>Diode unit 2; continuous plate-current maximum 5 mA.</i>	

Twin diode and sharp-cutoff pentode for television horizontal oscillator and AFC discriminator circuits.
Explicit heater variant/co-designation of 8LT8 in the approved source.

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 Voltage	330 V	—
Maximum Plate Dissipation	3.1 W	—
Maximum Screen Dissipation	0.65 W	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	200000 ohm	—
Transconductance	13000 uS	—
Interelectrode Capacitances Published	true	—

1968 GENERAL ELECTRIC CO

Section 2 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Cathode Current	5 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Average Diode Current	20 mA	5 V DC applied
Interelectrode Capacitances Published	true	—

1968 GENERAL ELECTRIC CO

Section 3 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Cathode Current	5 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Average Diode Current	20 mA	5 V DC applied
Interelectrode Capacitances Published	true	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

1975 RCA RC30

SOURCE PDF

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
Heater Warm-up Time (Average)	11 s	Other;PublishedValue1
Heater Warm-up Time (Average)	11 s	Other;PublishedValue2
Heater Warm-up Time (Average)	11 s	Other;PublishedValue3
Peak value	200 V	Other;PublishedValue1
Peak value	200 V	Other;PublishedValue2
Peak value	200 V	Other;PublishedValue3
Average value	100 V	Other;PublishedValue1
Average value	100 V	Other;PublishedValue2
Average value	100 V	Other;PublishedValue3
Plate Voltage	330 V	MaximumRating
Grid-No	2 V	MaximumRating;PublishedValue1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No	330 V	MaximumRating;PublishedValue2
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0 V	MaximumRating
Plate Dissipation	3.1 W	MaximumRating
For grid-No	2 V	MaximumRating;PublishedValue1
For grid-No	165 V	MaximumRating;PublishedValue2
For grid-No	0.65 V	MaximumRating;PublishedValue3
For grid-No	2 V	MaximumRating;PublishedValue1
For grid-No	165 V	MaximumRating;PublishedValue2
For grid-No	33 V	MaximumRating;PublishedValue3
For grid-No	300 V	MaximumRating;PublishedValue4
Maximum Plate Voltage	330 V	Section1
Maximum Screen Voltage	330 V	Section1
Maximum Plate Dissipation	3.1 W	Section1
Maximum Screen Dissipation	0.65 W	Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	125 V	Characteristic
Grid-No	2 V	Characteristic;PublishedValue1
Grid-No	125 V	Characteristic;PublishedValue2
Cathode-Bias Resistor	56 ohm	Characteristic
Plate Resistance (Approx.)	200000 ohm	Characteristic
Plate Current	10 mA	Characteristic
Grid-No	2 mA	Characteristic;PublishedValue1
Grid-No	3.4 mA	Characteristic;PublishedValue2
Grid-No.1 Voltage (Approx.) for plate current of	20 V	Characteristic;PublishedValue1
Grid-No.1 Voltage (Approx.) for plate current of	-3.5 V	Characteristic;PublishedValue2
Tube Voltage Drop for plate current of	20 mA	Characteristic
Plate Resistance	200000 ohm	Section1
Transconductance	13000 uS	Section1

Characteristic		
Parameter	Published Value	Condition / Note
Tube Voltage Drop at 20 mA	5 V	InstantaneousValue