



ELECTRONIC TUBE REFERENCE

6EU8

Voltage Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Triode oscillator plus sharp-cutoff pentode mixer for television frequency-converter service, with controlled heater-cathode warm-up.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	9
NOMINAL HEATER	6.3 V / 450 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	80000 Ω
TRANSCONDUCTANCE	0.0064 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	3.1 W
MAXIMUM SCREEN DISSIPATION	0.55 W
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
<i>Pentode section.</i>	

SECTION2 Triode	
PLATE RESISTANCE	5000 Ω
TRANSCONDUCTANCE	0.0085 S
AMPLIFICATION FACTOR	40
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	3 W
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
<i>Triode section.</i>	

The 6EU8 combines a triode oscillator section with a sharp-cutoff pentode mixer section for television receivers and includes controlled heater/cathode warm-up behavior.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1966 Tung Sol Electronic Tubes 2 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 2 OF 4

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate_voltage	125 V	ClassA
Screen_voltage	125 V	ClassA
Grid_1_voltage	-1 V	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate_current	12 mA	ClassA
Screen_current	4 mA	ClassA

1966 TUNG SOL ELECTRONIC TUBES 2 OF 4

Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate_voltage	150 V	ClassA
Cathode_resistor	56 ohm	ClassA
Heater_warmup_time	11 s	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate_current	18 mA	ClassA



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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	125 V	PentodeSection
Screen Voltage	125 V	PentodeSection
Plate Current	12 mA	PentodeSection

1968 GENERAL ELECTRIC CO
Section 2 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	150 V	TriodeSection
Plate Current	18 mA	TriodeSection



SOURCE DATA APPENDIX

1971 RCA HB3 Binder 4 of 7

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

1971 RCA HB3 BINDER 4 OF 7
Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	100 V	ClassA
Maximum plate voltage	330 V	—
Maximum screen-grid voltage	330 V	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pin 1 - Pentode Plate – published value 1	1	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Pin 1 - Pentode Plate – published value 2	7	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Grid	8	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Pin 6 -Triode Cathode 0~% – published value 1	6	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Pin 6 -Triode Cathode 0~% – published value 2	0	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Pin 6 -Triode Cathode 0~% – published value 3	9	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.

1971 RCA HB3 BINDER 4 OF 7

Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	100 V	ClassA
Maximum plate voltage	330 V	—
Grid No.1 to plate – published value 1	0.02 mA	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Grid No.1 to plate – published value 2	0.1 mA	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
PLATE VOLTAGE – published value 1	33 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
PLATE VOLTAGE – published value 2	330 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
SUPPLY VOLTAGE	330 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Positive-bias value – published value 1	0 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Positive-bias value – published value 2	0 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
PLATE DISSIPATION – published value 1	3 mA	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
PLATE DISSIPATION – published value 2	3.1 mA	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
respect to cathode – published value 1	200 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
respect to cathode – published value 2	200 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
respect to cathode – published value 1	200 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
respect to cathode – published value 2	200 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
GriQ-No.1~ircuit Resistance – published value 1	0.1 mA	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
GriQ-No.1~ircuit Resistance – published value 2	0.1 mA	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification factor	17	ClassA
Voltage (AC or DC)	6.3 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Current – published value 1	0 mA	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Current – published value 2	45 A	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Current – published value 3	6 A	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Grid to plate – published value 1	1	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Grid to plate – published value 2	7	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Grid to plate – published value 3	1.7	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Grid to cathode and heater – published value 1	3	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Grid to cathode and heater – published value 2	3.2	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Plate to cathode and heater – published value 1	1.6	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Plate to cathode and heater – published value 2	1.1	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
grid No.2, and heater – published value 1	5	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
grid No.2, and heater – published value 2	5	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
No.2, and heater – published value 1	26	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
No.2, and heater – published value 2	3.4	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Heater to cathode (Each unit) – published value 1	3.6	EachUnit
Heater to cathode (Each unit) – published value 2	3.6	EachUnit
Grid-No.2 Supply Voltage	125 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.1 Voltage	-1 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Cathode Resistor	56 ohm	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Plate Resistance (Approx) – published value 1	5000 ohm	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Plate Resistance (Approx) – published value 2	80000 ohm	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Transconductance – published value 1	8500	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Transconductance – published value 2	6400	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Grid-No.2 Current	4 mA	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
for plate $\mu_a = 10$ – published value 1	10 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
for plate $\mu_a = 10$ – published value 2	-12 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
for plate $\mu_a = 10$ – published value 3	-9 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Cathode Warm-Up Time	35	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Pin 2 -Triode	2	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Pin 4 -Heater	4	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Pin 5 -Heater – published value 1	5	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pin 5 -Heater – published value 2	1	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
between 165 and 330 volts – published value 1	165 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
between 165 and 330 volts – published value 2	330 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
the LuDe is operated from a cold start with do plate volts	100 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.