



ELECTRONIC TUBE REFERENCE

6BW8

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

3 SECTIONS

CONSTRUCTION

DIODE-DIODE-PENTODE

Double-diode pentode designed primarily for television horizontal phase detection plus sound IF, limiter, and AGC service. Its functional center is television signal processing rather than general radio detection.

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 Diode

No fixed ratings recorded.

Published promoted values applied where applicable; additional table data retained as parameters.

SECTION2 Pentode

PLATE RESISTANCE	250000 Ω
TRANSCONDUCTANCE	0.0052 S
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	3 W
<i>Diode 1.</i>	

SECTION3 Diode

No fixed ratings recorded.

Diode 2.

6BW8 is a DualDiodePentode device. Double-diode pentode for horizontal phase detection plus sound IF/limiter/AGC service.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1961 Tung Sol

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

1961 TUNG SOL

Section 1 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	250 V	Published operating/characteristic table
Screen Voltage	110 V	Published operating/characteristic table
Grid Voltage	-10 V	Published operating/characteristic table

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	10 mA	Published operating/characteristic table
Screen Current	3.5 mA	Published operating/characteristic table
Transconductance	5200 μ S	Published operating/characteristic table
Plate Resistance	0.25 ohm	Published operating/characteristic table

1961 TUNG SOL

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	250 V	Published operating/characteristic table
Screen Voltage	110 V	Published operating/characteristic table
Grid Voltage	-10 V	Published operating/characteristic table

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	10 mA	Published operating/characteristic table
Screen Current	3.5 mA	Published operating/characteristic table
Transconductance	5200 μ S	Published operating/characteristic table
Plate Resistance	0.25 ohm	Published operating/characteristic table



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 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Plate Voltage	250 V	—
Typical Screen Voltage	110 V	—

1968 GENERAL ELECTRIC CO

Section 2 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Average Diode Current At5 V	20 mA	Section2

1968 GENERAL ELECTRIC CO

Section 3 · Diode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Average Diode Current At5 V	20 mA	Section3



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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 · Diode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC) – published value 1	6.3 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Voltage (AC or DC) – published value 2	10 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Current – published value 1	0 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Current – published value 2	45 A	Published datasheet value; multiple values represent separate source-table limits or conditions.
and heater	4.8	Published datasheet value; multiple values represent separate source-table limits or conditions.
and heater	2.6	Published datasheet value; multiple values represent separate source-table limits or conditions.
and heater	1.3	Published datasheet value; multiple values represent separate source-table limits or conditions.
and heater	1.2	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Supply Voltage	250 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid-No.2 Supply Voltage	110 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Resistance (Approx) – published value 1	0 ohm	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Resistance (Approx) – published value 2	25 ohm	Published datasheet value; multiple values represent separate source-table limits or conditions.
Transconductance	5200	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.2 Current	3.5 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Current	10 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
plate μ a = 10 – published value 1	10 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
plate μ a = 10 – published value 2	-10 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 2 -Diode Cathode	2	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.
For grid-No.2 voltages between 165	165 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
and 330 volts	330 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Current for plate volts = 5 – published value 1	5 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Current for plate volts = 5 – published value 2	20 V	Published datasheet value; multiple values represent separate source-table limits or conditions.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to prate – published value 1	0 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid No.1 to prate – published value 2	2 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
diode plate	0.006 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PLATE VOLTAGE	330 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
GRID-No.2 (SCREEN-RID) SUPPLY VOLTAGE	330 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Negative-bias value	55 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Positive-bias value	0 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
For grid-No.2 voltages up to 165 volts – published value 1	165 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
For grid-No.2 voltages up to 165 volts – published value 2	0.55 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
PLATE DISSIPATION	3 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater negative with respect to cathode. 200 max	200 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater positive with respect to cathode. 200b max	200 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
For fixed-bias operation	1 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
For cathode-bias operation	5 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
PLATE CURRENT	5 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pin 4 -Heater – published value 1	4	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 4 -Heater – published value 2	8	Published datasheet value; multiple values represent separate source-table limits or conditions.

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