



ELECTRONIC TUBE REFERENCE

5HB7

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Combined triode-pentode used as an oscillator and mixer or frequency converter in television or VHF communications receivers.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	9
NOMINAL HEATER	4.7 V / 600 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	5000 Ω
TRANSCONDUCTANCE	0.0085 S
AMPLIFICATION FACTOR	40
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	2.5 W
<i>Published ratings/characteristics promoted from supplied source; additional conditions retained in parameter table.</i>	

SECTION2 Pentode	
PLATE RESISTANCE	200000 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
<i>Published ratings/characteristics promoted from supplied source; additional conditions retained in parameter table.</i>	

Miniature type used as combined oscillator and mixer B (T//L- tube in color and black-and-white television receivers G ip utilizing an intermediate frequency in the order of 40 MHz. Outlines section, 6B; requires miniature 9- k,G3 ,is contact socket. Type 5HB7 is identical with type 6HB7 p except for heater ratings. 9QA 5HB7 6HB7

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	4.7 V	—
Heater Current	450 mA	—
EquivalentElectricalType	6HB7	ExceptHeater
TriodeGridToPlateCapacitance	1.9 pF	—
Triode Input Capacitance	3 pF	—
TriodeOutputCapacitance	1.9 pF	—
TriodeTransconductance	8500 uS	—
TriodePlateResistance	5000 ohm	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
TriodePlateVoltage	150 V	ClassA
TriodePlateCurrent	18 mA	ClassA

1964 RMA EIA

Section 2 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
EquivalentElectricalType	6HB7	ExceptHeater
PentodeGridToPlateCapacitanceMaximum	0.01 pF	—
Pentode Input Capacitance	5 pF	—
Pentode Output Capacitance	3.4 pF	—
PentodeTransconductance	6400 uS	—
PentodePlateResistance	200000 ohm	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PentodePlateVoltage	125 V	ClassA
PentodeScreenVoltage	125 V	ClassA
PentodePlateCurrent	12 mA	ClassA
PentodeScreenCurrent	4 mA	ClassA



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1965 Westinghouse Data Book

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

1965 WESTINGHOUSE DATA BOOK

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode typical plate voltage	150 V	—
Heater-cathode voltage maximum	200 V	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode transconductance	8500 μ S	—
Triode amplification factor	40	—
Triode plate resistance	5000 ohm	—
Heater warm-up time	11 s	—

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Oscillator / phase inverter / vertical oscillator	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode grid-to-plate capacitance	1.9 pF	—

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pentode/tetrode typical plate voltage	125 V	—
Pentode/tetrode grid2 voltage	125 V	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pentode/tetrode transconductance	6400 μ S	—
Pentode/tetrode plate resistance	200000 ohm	—

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Mixer / IF / video / general-purpose amplifier	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pentode grid1-to-plate capacitance maximum	0.01 pF	—



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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Grid-No.1 Voltage	55 volts	Published value from supplied target entry
Peak Negative-Pulse Grid-No.1 Voltage	330 volts	Published value from supplied target entry

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Cathode Current	800 mA	Published value from supplied target entry
Average Cathode Current	230 mA	Published value from supplied target entry
Grid-No	3.5 watts	Published value from supplied target entry
Grid-No.1-Circuit Resistance	1 megohm	Published value from supplied target entry
Heater Voltage (ac/dc)	6.3 volts	Published value from supplied target entry
Heater Current	0.45 ampere	Published value from supplied target entry
Heater Warm-up Time (Average)	11 seconds	Published value from supplied target entry
Plate Voltage	330 volts	Published value from supplied target entry
Grid-No	330 volts	Published value from supplied target entry
Grid-No	300	Published value from supplied target entry
Plate Dissipation	3.1 watts	Published value from supplied target entry
Grid-No	2	Published value from supplied target entry
For grid-No	165 volts	Published value from supplied target entry
For grid-No	300 volts	Published value from supplied target entry
Plate Supply Voltage	125 volts	Published value from supplied target entry
Grid-No	125 volts	Published value from supplied target entry
Grid-No.1 Supply Voltage	-1 volts	Published value from supplied target entry
Amplification Factor	40	Published value from supplied target entry
Plate Resistance (Approx.)	0.2 megohm	Published value from supplied target entry
Transconductance	6400	Published value from supplied target entry
Plate Current	12 mA	Published value from supplied target entry
Grid-No	4 mA	Published value from supplied target entry
Grid-No	1	Published value from supplied target entry

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate	1.9 pF	Published value from supplied target entry
Grid to Cathode, Heater, Pentode Grid No	3 pF	Published value from supplied target entry
Plate to Cathode, Heater, Pentode Grid No	1.9 pF	Published value from supplied target entry
Plate to Cathode, Heater, Grid No	3	Published value from supplied target entry

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater to Cathode'	3.8 pF	Published value from supplied target entry

TUBE TINKER

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