



ELECTRONIC TUBE REFERENCE

6B8G

Voltage - Pentode or Tetrode (under 100V) electronic tube

CONSOLIDATED TECHNICAL DATA

3 SECTIONS

CONSTRUCTION

DIODE-DIODE-PENTODE

Receiving tube combining radio signal detection or control-voltage rectification with associated voltage amplification. Its detector function is integral to receiver signal processing and supports classification within the radio detector/converter family.

GENERAL CHARACTERISTICS

BASE DESIGNATION	InternationalOctal	BASE PINS	8
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Common cathode	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	600000 Ω
TRANSCONDUCTANCE	0.001125 S
AMPLIFICATION FACTOR	285
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	126 V
MAXIMUM PLATE DISSIPATION	2.2 W
MAXIMUM SCREEN DISSIPATION	0.3 W
Remote-cutoff pentode section.	

SECTION2 Diode	
MAXIMUM PLATE VOLTAGE	10 V
NOMINAL OUTPUT CURRENT	1 mA
<i>First diode section.</i>	

SECTION3 Diode	
MAXIMUM PLATE VOLTAGE	10 V
NOMINAL OUTPUT CURRENT	1 mA
<i>Second diode section.</i>	

Duo-diode high-gain pentode combining two diode sections with a pentode amplifier.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1937 Raytheon Radio Receiving Tubes

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

1937 RAYTHEON RADIO RECEIVING TUBES

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
lax. Plate Voltage	250 V	Published table

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
D_WU4 Grid to Plate	0.007	Published table
Plate Voltage	100 V	Published table; Column1
Plate Voltage	180 V	Published table; Column2
Plate Voltage	250 V	Published table; Column3
Plate Voltage	250 V	Published table; Column4
Screen Voltage	100 V	Published table; Column1
Screen Voltage	75 V	Published table; Column2
Screen Voltage	100 V	Published table; Column3
Screen Voltage	126 V	Published table; Column4
Amplification Factor	285	Published table; Column1
Amplification Factor	840	Published table; Column2
Amplification Factor	800	Published table; Column3
Amplification Factor	730	Published table; Column4
Plate Resistance	0.3 ohm	Published table; Column1
Plate Resistance	1 ohm	Published table; Column2
Plate Resistance	0.8 ohm	Published table; Column3
Plate Resistance	0.65 ohm	Published table; Column4
Transconductance	980	Published table; Column1
Transconductance	840	Published table; Column2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	1000	Published table; Column3
Transconductance	1125	Published table; Column4
Plate Current	5.8 mA	Published table; Column1
Plate Current	3.4 mA	Published table; Column2
Plate Current	6 mA	Published table; Column3
Plate Current	9 mA	Published table; Column4
Screen Current	1.7 mA	Published table; Column1
Screen Current	0.9 mA	Published table; Column2
Screen Current	1.5 mA	Published table; Column3
Screen Current	2.3 mA	Published table; Column4
Grid Bias	-17 V	Published table; Column1
Grid Bias	-13 V	Published table; Column2
Grid Bias	17 V	Published table; Column3
Grid Bias	21 V	Published table; Column4
Plate Supply Voltage	250 V	Published table; Column1
Plate Supply Voltage	250 V	Published table; Column2
Plate Supply Voltage	250 V	Published table; Column3
Screen Voltage	45 V	Published table; Column1
Screen Voltage	50 V	Published table; Column2
Grid Bias	-5 V	Published table; Column1
Grid Bias	4.5 V	Published table; Column2
Grid Bias	3 V	Published table; Column3
Plate Resistor	0.5 ohm	Published table; Column1
Plate Resistor	0.25 ohm	Published table; Column2
Plate Resistor	0.027 ohm	Published table; Column3
Plate Current	0.25 mA	Published table; Column1
Plate Current	0.65 mA	Published table; Column2
Plate Current	5.4 mA	Published table; Column3



1950 Sylvania

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

1950 SYLVANIA
Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage AC or DC 6.5 Volts	6.5 V	Heater Voltage AC or DC 6.5 Volts
Heater Current 0.3 Ampere	300 mA	Heater Current 0.3 Ampere
With an applied d-c plate voltage of 10 volts the space	10 V	With an applied d-c plate voltage of 10 volts the space
Heater Voltage 6.3 6.3 6.3 6.3 Volts (soTTOM VIEW)	6.3 V	Heater Voltage 6.3 6.3 6.3 6.3 Volts (soTTOM VIEW)
Grid Voltage -3 -3 -3 -3 Volts	-3 V	Grid Voltage -3 -3 -3 -3 Volts
Plate Current 5.8 3.4 6.0 9.0 Ma.	9 mA	Plate Current 5.8 3.4 6.0 9.0 Ma.
Screen Current 1.7 0.9 1.5 2.3 Ma.	2.3 mA	Screen Current 1.7 0.9 1.5 2.3 Ma.
Grid Bias Voltage** -17 -13 -17 -21 Volts	-21 V	Grid Bias Voltage** -17 -13 -17 -21 Volts



SOURCE DATA APPENDIX

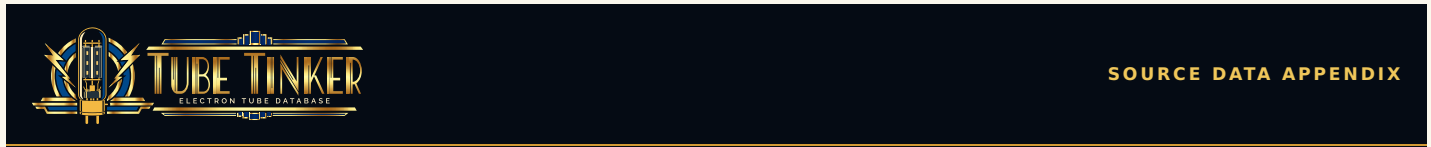
195X General Electric Essential Characteristics

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

195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA
Screen-grid voltage	125 V	ClassA
Grid voltage	-3 V	ClassA
Plate current	10 mA	ClassA
Screen-grid current	2.3 mA	ClassA



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1961 Ferranti Technical Handbook

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

1961 FERRANTI TECHNICAL HANDBOOK

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA
Screen-grid voltage	125 V	ClassA
Control-grid voltage	-3 V	ClassA
Plate current	2 mA	ClassA
Screen-grid current	2.3 mA	ClassA

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	1120 μ S	ClassA
Plate resistance	600000 Ohm	ClassA
Control-grid cutoff voltage	-21 V	ClassA

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	3.6 pF	PentodeSection
Output capacitance	9.5 pF	PentodeSection

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance maximum	0.01 pF	PentodeSection

1961 FERRANTI TECHNICAL HANDBOOK

Section 2 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Diode current maximum	1 mA	Diode1

1961 FERRANTI TECHNICAL HANDBOOK

Section 3 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Diode current maximum	1 mA	Diode2



SOURCE DATA APPENDIX

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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	300 mA	—
Plate current	5.8 mA	Typical operating conditions

1961 TUNG SOL

Section 2 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	300 mA	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	300 mA	—

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