

ELECTRONIC TUBE REFERENCE

6B7

Voltage Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA
3 SECTIONS
CONSTRUCTION
DIODE-DIODE-PENTODE

Duplex-diode remote-cutoff pentode combining radio detector and AVC functions with gain-controlled RF or IF amplification. Its variable-mu characteristic permits smooth receiver gain control from the detected AVC voltage.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7D	BASE PINS	7
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Common cathode	SECTION CONSTRUCTION	Dissimilar

7D - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – IS	A	IS – Internal Screen	CONNECTED
PIN2 – H	–	H – Heater	CONNECTED
PIN3 – 2P	B	P – Plate (Anode)	CONNECTED
PIN4 – 2K	B	K – Cathode	CONNECTED
PIN5 – 1P	A	P – Plate (Anode)	CONNECTED
PIN7 – H	–	H – Heater	CONNECTED
PIN8 – 1K	A	K – Cathode	CONNECTED

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	650000 Ω
TRANSCONDUCTANCE	0.001125 S
AMPLIFICATION FACTOR	285
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	125 V
MAXIMUM PLATE DISSIPATION	2.25 W
MAXIMUM SCREEN DISSIPATION	0.3 W
MAXIMUM CATHODE CURRENT	15 mA
<i>Remote-cutoff pentode section.</i>	

SECTION2 Diode	
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	100 V
MAXIMUM CATHODE CURRENT	1 mA
<i>First diode section.</i>	

SECTION3 Diode	
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	100 V
MAXIMUM CATHODE CURRENT	1 mA
<i>Second diode section.</i>	

Double-diode high-gain pentode combining detector/AVC diodes with a pentode amplifier section.

SOURCE OPERATING CONDITIONS

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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
Maximum Plate Voltage	250 V	ClassA
Maximum Screen Voltage	125 V	ClassA
Grid to Plate	0.007 pF	ClassA
Input	2.5	ClassA
Output	9.5 pF	ClassA
Plate Voltage	100 V	ClassA; Column1
Plate Voltage	180 V	ClassA; Column2
Plate Voltage	250 V	ClassA; Column3
Plate Voltage	250 V	ClassA; Column4
Screen Voltage	100 V	ClassA; Column1
Screen Voltage	75 V	ClassA; Column2
Screen Voltage	100 V	ClassA; Column3
Screen Voltage	125 V	ClassA; Column4
Amplification Factor	285	ClassA; Column1
Amplification Factor	840	ClassA; Column2
Amplification Factor	800	ClassA; Column3
Amplification Factor	730	ClassA; Column4
Transconductance	950 uS	ClassA; Column1
Transconductance	840 uS	ClassA; Column2
Transconductance	1000 uS	ClassA; Column3
Transconductance	1125 uS	ClassA; Column4
Plate Current	5.8 mA	ClassA; Column1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	3.4 mA	ClassA; Column2
Plate Current	6 mA	ClassA; Column3
Screen Current	1.7 mA	ClassA; Column1
Screen Current	9 mA	ClassA; Column2
Screen Current	1.5 mA	ClassA; Column3
Screen Current	2.3 mA	ClassA; Column4
Plate Supply Voltage	250 V	ClassA; Column1
Plate Supply Voltage	250 V	ClassA; Column2
Plate Supply Voltage	250 V	ClassA; Column3
Plate Resistor	0.5 ohm	ClassA; Column1
Plate Resistor	25 ohm	ClassA; Column2
Plate Resistor	27 ohm	ClassA; Column3
Plate Current	0.25 mA	ClassA; Column1
Plate Current	0.65 mA	ClassA; Column2
Plate Current	5.4 mA	ClassA; Column3



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1940 RCA

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1940 RCA
Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	6.3 V	Nominal
HeaterCurrentNominal	300 mA	Nominal
Maximum Plate Voltage	250 V	—
Maximum Cathode Current	15 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	1125 μ S	Typical
Plate Resistance	650000 ohm	Typical

1940 RCA

Section 2 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	6.3 V	Nominal
HeaterCurrentNominal	300 mA	Nominal
Maximum Plate Voltage	250 V	—
Maximum Cathode Current	1 mA	—


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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
Tension de chauffage (CA. ou CC.) 6,3 volts	6.3 V	Tension de chauffage (CA. ou CC.) 6,3 volts
Courant de chauffage 0,3 ampère	300 mA	Courant de chauffage 0,3 ampère
Pour une tension continue de 10 volts appliquée A la plaque le	10 V	Pour une tension continue de 10 volts appliquée A la plaque le
Tension de chauffage 6,3 6,3 6,3 6,3 volts	6.3 V	Tension de chauffage 6,3 6,3 6,3 6,3 volts
Courant plaque 5,8 3,4 6,0 9,0 ma.	9 mA	Courant plaque 5,8 3,4 6,0 9,0 ma.
Courant de grille écran 1,7 0,9 1,5 2,3 ma.	2.3 mA	Courant de grille écran 1,7 0,9 1,5 2,3 ma.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tension de polarisation® ... -17 -13 -17 =21 volts	21 V	Tension de polarisation® ... -17 -13 -17 =21 volts
Conductance 'mutuelle 950 840 1,000 1,125 ymhos	1.125 ymhos	Conductance 'mutuelle 950 840 1,000 1,125 ymhos
Tension de chauffage 6,3 volts	6.3 V	Tension de chauffage 6,3 volts
Tension d'alimentation plaque 250 volts	250 V	Tension d'alimentation plaque 250 volts
Tension écran L 50 volts	50 V	Tension écran L 50 volts
Courant plague e ae e e 0,65 ma.	0.65 mA	Courant plague e ae e e 0,65 ma.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tension de plaque 100 180 250 250 volts max.	250 V	Tension de plaque 100 180 250 250 volts max.
Tension de grille écran 100 5 100 125 volts max.	125 V	Tension de grille écran 100 5 100 125 volts max.



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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

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen-grid current	2.3 mA	ClassA



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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	—

1961 TUNG SOL

Section 3 · Diode

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