



ELECTRONIC TUBE REFERENCE

6D6

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Remote-cutoff high-frequency pentode for RF amplification or first-detector service. Its broad cutoff characteristic supports automatic volume control while high plate resistance provides useful receiver front-end gain.

GENERAL CHARACTERISTICS

BASE DESIGNATION	6F	BASE PINS	6
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	800000 Ω
TRANSCONDUCTANCE	0.0016 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	2.25 W
MAXIMUM SCREEN DISSIPATION	0.25 W
MAXIMUM CATHODE CURRENT	15 mA
Remote-cutoff RF pentode.	

High-frequency remote-cutoff pentode for RF amplification or first-detector service in AC, DC, universal, or automobile receivers.

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
& PRONG Haximum Plate Voltage	250 V	Published table
SMALL BRSE lexlmun Screen Voltage	100 V	Published table
Plate Voltage	100 V	ClassA; Column1
Plate Voltage	250 V	ClassA; Column2
Screen Voltage	100 V	ClassA; Column1
Screen Voltage	100 V	ClassA; Column2
Grid Bias	-3	ClassA
Amplification Factor	1280	ClassA
Plate Resistance	0.25	ClassA; Column1
Plate Resistance	0.8	ClassA; Column2
Transconductance	1500 uS	ClassA; Column1
Transconductance	1600 uS	ClassA; Column2
Plate Current	8	ClassA; Column1
Plate Current	8.2	ClassA; Column2
Screen Current	2.2 mA	ClassA; Column1
Screen Current	2 mA	ClassA; Column2
Grid Blas for Transconductance =	2 V	ClassA; Column1
Grid Blas for Transconductance =	50 V	ClassA; Column2
Grid Blas for Transconductance =	-50 V	ClassA; Column3
Grid Bias	-10 V	ClassA; Column1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid Bias	10 V	ClassA; Column2
The grid bias is not critical with an oscillator peak swing	1 V	ClassA

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input	5	Published table
Output	6.5	Published table


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1940 RCA

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

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 Screen Voltage	100 V	—
Maximum Cathode Current	15 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	1600 μ S	Typical
Amplification Factor	1280	Typical
Plate Resistance	800000 ohm	Typical


SOURCE DATA APPENDIX

1948 Brimar Radio Valve Manual

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

1948 BRIMAR RADIO VALVE MANUAL

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode Voltage	250 V	—
Anode Current	8.2 mA	—
Screen Voltage	100 V	—
Screen Current	2 mA	—
Control Grid Voltage	-3 V	—
Cutoff Voltage	-50 V	—



SOURCE DATA APPENDIX

1950 Sylvania

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

1950 SYLVANIA

Section 1 · Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-Plate Capacitance	0.007 pF	With shield
Input Capacitance	4.7 pF	—
Output Capacitance	6.5 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	8.2 mA	250 V plate, 100 V screen
Conversion/Detector Grid Bias	-10 V	First detector; approximate minimum



SOURCE OPERATING CONDITIONS

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1958 Brimar Radio Valve No 7

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

1958 BRIMAR RADIO VALVE NO 7

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	300 mA	—



SOURCE OPERATING CONDITIONS

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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	100 V	ClassA
Grid voltage	-3 V	ClassA
Plate current	8.2 mA	ClassA
Screen-grid current	2 mA	ClassA

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	4.7 pF	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Output capacitance	6.5 pF	—
Grid-to-plate capacitance	0.007 pF	—



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
Plate Voltage	250 V	Published operating/characteristic table
Screen Voltage	100 V	Published operating/characteristic table
Grid Voltage	-50 V	Published operating/characteristic table

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	8.2 mA	Published operating/characteristic table
Screen Current	2 mA	Published operating/characteristic table
Transconductance	1600 uS	Published operating/characteristic table
Plate Resistance	0.8 ohm	Published operating/characteristic table

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