

ELECTRONIC TUBE REFERENCE

6AU6

Voltage - Pentode Sharp Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Fixed-slope sharp-cutoff pentode for general RF voltage amplification in receiver and electronic equipment.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7BK	BASE PINS	7
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

7BK - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – G1	A	G1 – Control Grid	CONNECTED
PIN2 – G3	A	G3 – Suppressor Grid	CONNECTED
PIN2 – IS	A	IS – Internal Screen	CONNECTED
PIN3 – H	–	H – Heater	CONNECTED
PIN4 – H	–	H – Heater	CONNECTED
PIN5 – P	A	P – Plate (Anode)	CONNECTED
PIN6 – G2	A	G2 – Screen Grid	CONNECTED
PIN7 – K	A	K – Cathode	CONNECTED

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	1000000 Ω
TRANSCONDUCTANCE	0.0052 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	150 V
MAXIMUM PLATE DISSIPATION	3.3 W
MAXIMUM SCREEN DISSIPATION	0.7 W
MAXIMUM CATHODE CURRENT	18 mA
<i>Promoted from the printed maximum-rating/characteristic columns; operating points retained as section parameters.</i>	

Indirectly heated fixed-slope pentode for RF voltage amplification.



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

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195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA
Screen voltage	150 V	ClassA
Plate current	10.6 mA	ClassA
Screen current	4.3 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	1000000 Ω	ClassA
Transconductance	5200 μS	ClassA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	4800 μ S	TriodeConnection
Amplification factor	36	TriodeConnection


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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	—


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1963 Amperex Condensed

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1963 AMPEREX CONDENSED

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	Published table
Screen voltage	150 V	Published table
Control-grid bias	-6.5 V	Published table
Plate current	10.6 mA	Published table
Screen current	4.3 mA	Published table
Triode-connected plate voltage	250 V	TriodeConnection

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode-connected grid bias	-1 V	TriodeConnection
Triode-connected plate current	13 mA	TriodeConnection

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	5200 μ S	Published table
Amplification factor	36	Published table
Plate resistance	1000000 ohm	Published table
Heater voltage	6.3 V	Published heater rating
Heater current	300 mA	Published heater rating
Triode-connected amplification factor	36	TriodeConnection
Triode-connected transconductance	4800 μ S	TriodeConnection


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1963 Mullard

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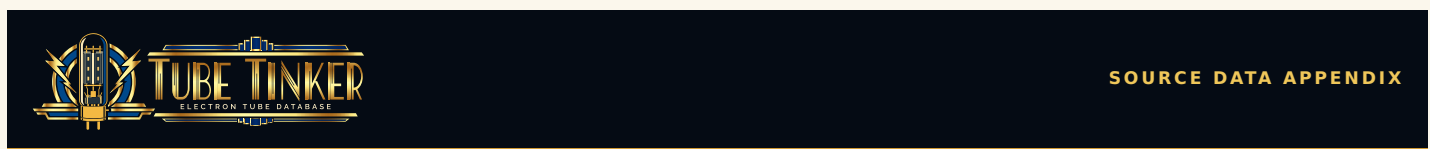
1963 MULLARD

Section 1 · Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	5.5 pF	PentodeConnection
Output capacitance	5 pF	PentodeConnection
Grid-to-plate capacitance maximum	0.003 pF	PentodeConnection

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	100 V	PentodeConnection;Point1
Screen-grid voltage	100 V	PentodeConnection;Point1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current	5 mA	PentodeConnection;Point1
Screen-grid current	2.1 mA	PentodeConnection;Point1
Transconductance	3900 uS	PentodeConnection;Point1
Plate resistance	500000 Ohm	PentodeConnection;Point1
Plate voltage	250 V	PentodeConnection;Point2
Screen-grid voltage	125 V	PentodeConnection;Point2
Plate current	7.6 mA	PentodeConnection;Point2
Screen-grid current	3 mA	PentodeConnection;Point2
Transconductance	4500 uS	PentodeConnection;Point2
Plate resistance	1500000 Ohm	PentodeConnection;Point2
Triode-connected transconductance	4800 uS	TriodeConnection;Va=250V
Triode-connected amplification factor	36 ratio	TriodeConnection;Va=250V
Triode-connected plate resistance	7500 Ohm	TriodeConnection;Va=250V



SOURCE OPERATING CONDITIONS

1965 Sylvania Electronic Tubes Vol3

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1965 SYLVANIA ELECTRONIC TUBES VOL3

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	PentodeConnection
Screen-grid voltage	125 V	PentodeConnection
Cathode resistor	100 Ohm	PentodeConnection
Transconductance	4500 uS	PentodeConnection
Plate resistance	1500000 Ohm	PentodeConnection
Plate current	7.6 mA	PentodeConnection

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen-grid current	3 mA	PentodeConnection
Triode-connected plate voltage	250 V	TriodeConnection
Triode-connected amplification factor	36 ratio	TriodeConnection
Triode-connected plate resistance	7500 Ohm	TriodeConnection

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.0035 pF	PentodeConnection
Input capacitance	5.5 pF	PentodeConnection
Output capacitance	5 pF	PentodeConnection



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1965 Westinghouse Data Book

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1965 WESTINGHOUSE DATA BOOK

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltage	6.3 V	—
HeaterOrFilamentCurrent	300 mA	—
Plate Voltage	250 V	—
Screen Voltage	150 V	—
Grid Voltage	-2 V	—
Plate Current	10.5 mA	—
Screen Current	4.2 mA	—
Transconductance	5200 uS	—
Plate Resistance	500000 ohm	—
GridToPlateCapacitanceMaximum	0.0035 pF	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input Capacitance	5.5 pF	—
Output Capacitance	5 pF	—
TriodeConnectedAmplificationFactor	36	—
TriodeConnectedPlateResistance	7500 ohm	TriodeConnection



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1966 Tung Sol Electronic Tubes 1 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 1 OF 4

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published table
Heater current	300 mA	Published table
Plate resistance	1000000 ohm	Published table
Transconductance	5200 μS	Published table
Amplification factor	36	Published table

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	RFamplifier
Screen voltage	150 V	RFamplifier
Plate current	10.6 mA	RFamplifier
Screen current	4.3 mA	RFamplifier



SOURCE DATA APPENDIX

1968 Mazda Belvu

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1968 MAZDA BELVU
Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage = ... eccrerseersermescenserçeesesssesesousess VĚ	6.3 V	—
Heater current ...If	300 mA	—
Tension d'ANOĚĚ L..... scosriesencenssensescenceoncessensesssesraerenaveenees V0	300 V	—
Screen-grid voltage ... Ve	150 V	—
Screen-grid voltage à courant nul ascssssssassseesersssecen V 82 DL	300 V	—
Plate dissipation ... asnoncrsosesssccoreausnerersenvemernsenseccsecnren PB	3 W	—
Screen-grid dissipation arscssreressertenenaene se ssssecace en se sess se E 22	0.65 W	—
valeur de polarisation négative ... -VEg	50 V	—
valeur de polarisation positive ... Ve	0 V	—
Tension entre filament et cathod@ s VIE	180 V	—
Plate voltage ... sevsestensessesenseneesenemenventencse V 100 250	250 V	—
Screen-grid voltage ... Vg, 100 125 j	150 V	—
Plate resistance (approx.) p 0,5 1,5	1 MΩ	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacitance d'Entré@ srenseenenenesnmennätîssss CC	5.5 pF	InterelectrodeCapacitance
Capacitance d€ SOIĚĚLE cessenssseencassrsssncancansemenens CS	5 pF	InterelectrodeCapacitance
Capacitance grille n° 1/ AN0d€ rrreereereessene CB,/à	3.5 pF	InterelectrodeCapacitance

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacitance d'Entrée meemeeiassenenenennnnnnnÜNCe	3.1 pF	InterelectrodeCapacitance
sossvens CS	1.7 pF	InterelectrodeCapacitance
Capacitance grille n° 1/ AN0d€ ersecerrererres CB1/A	2.5 pF	InterelectrodeCapacitance

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