



ELECTRONIC TUBE REFERENCE

PL82

Power - TV Vertical Output electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Series-heater power pentode for television sound, vertical-deflection, and audio-frequency output service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	9
NOMINAL HEATER	16.5 V / 300 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Pentode	
PLATE RESISTANCE	20000 Ω
TRANSCONDUCTANCE	0.009 S
AMPLIFICATION FACTOR	10
MAXIMUM PLATE VOLTAGE	170 V
MAXIMUM SCREEN VOLTAGE	170 V
MAXIMUM PLATE DISSIPATION	9 W
MAXIMUM SCREEN DISSIPATION	2.9 W
MAXIMUM CATHODE CURRENT	75 mA
<i>Published values promoted where clearly readable; identical repeated sections compressed when applicable.</i>	

Power pentode for television vertical-deflection and audio-frequency amplification. The supplied French datasheet was translated to English for descriptive output.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1951 Philips Receiving Tubes for Television

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

1951 PHILIPS RECEIVING TUBES FOR TELEVISION

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode Voltage	170 V	—
Screen Voltage	170 V	—
Anode Current	53 mA	—
Transconductance	9500 μ S	AnodeVoltage=170V
Anode Voltage	200 V	—
Anode Current	45 mA	—
Transconductance	8000 μ S	AnodeVoltage=200V

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Power Output	4 W	SoundOutput; ClassA



SOURCE OPERATING CONDITIONS

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1953 La Radiotechnique

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

1953 LA RADIOTECHNIQUE

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Indirect (cathode isolee du filament). . . If	300 mA	Pentode
Alimentation en serie Vff	16.5 V	Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Haute tension Vvb,	200 V	Pentode
Plate voltage . . . Va	200 V	Pentode
Control-grid voltage . . . Vg, 10,4 -13,9V	-13.9 V	Pentode
Plate current	45 mA	Pentode
Screen-grid current. . . Ig,	8.5 mA	Pentode
Plate resistance P	24 kohm	Pentode
Transconductance	7.6 mA/V	Pentode
Output power. . . . Ps	4.2 W	Pentode
Plate voltage	250 V	Pentode
Screen-grid voltage . . . Vg,	250 V	Pentode
lanode	9 W	Pentode
grille 2	2.9 W	Pentode
Cathode current	75 mA	Pentode
cathode	200 V	Pentode
90 mA pour Va	170 V	Pentode
120 mA pour Va	200 V	Pentode
Pa < 4.5 W, on ne doit pas dépasser Va	450 V	Pentode
(3) En polarisation automatique; on ne doit pas dépasser 0,4MQ	0.4 Mohm	Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate capacitance	5.9 pF	Pentode

SOURCE OPERATING CONDITIONS

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1958 Mullard Receiving Tubes

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1958 MULLARD RECEIVING TUBES

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	200 V	—
Screen Voltage	200 V	—
Plate Current	45 mA	—
Transconductance	7600 μ S	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Dissipation	9 W	—

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

195X Tesla

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

195X TESLA

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	16.5 V	Published nominal value or midpoint of published range
Heater current	300 mA	Published nominal value or midpoint of published range

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	12.5 pF	Published first-page value
Output capacitance	5.5 pF	Published first-page value



SOURCE DATA APPENDIX

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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	16.5 V	—
Heater Current	300 mA	—
Anode Voltage	200 V	—
Screen Voltage	200 V	—
Anode Current	45 mA	—
Screen Current	8.5 mA	—
Transconductance	7600 μ S	—
Plate Resistance	24000 ohm	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Peak Anode Voltage	2500 V	Pulse
Power Output	4.2 W	ClassA; AudioAmplifier
Power Output	12 W	PushPull; TwoTubes; AudioAmplifier



SOURCE DATA APPENDIX

1963 Philips Electron Tubes Handbook V1

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

1963 PHILIPS ELECTRON TUBES HANDBOOK V1

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	170 V	AudioOutput;ClassA
Screen voltage	170 V	AudioOutput;ClassA
Control-grid voltage	-10.4 V	AudioOutput;ClassA
Plate current	53 mA	AudioOutput;ClassA
Screen current	10 mA	AudioOutput;ClassA
Load resistance	3000 Ω	AudioOutput;ClassA
Power output at 10% distortion	4 W	AudioOutput;ClassA
Application	Vertical/frame output or sound output Section1	

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	10200 μS	Section1
Plate resistance	20000 Ω	170V
Amplification factor	10	Section1



1968 Mazda Belvu

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

1968 MAZDA BELVU

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tension Filament seeeenmesnnennnnnnnnnnnnnnnn V	16.5 V	—
Tension d'anode n V 170	200 V	—
Résistance de grille n° 2 ... BR&	680 Ω	—
Tension de grille n° 1 uerressooe VB -10,4	-13.9 V	—
Courant d'anode seecsecereen IA 53	45 mA	—
Courant de grille n° 2 10	8.5 mA	—
sn cane e senscune se ranenaue es 10,2	8.6 mA	—
Résistance interne s P 20	24 KΩ	—
Puissance de sortie ... PS	4.2 W	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Courant filament erseeesennnnnnnnnnnnnnnnnnnsÜ0 TÎ	300 mA	—
Capacité anode/ grille n° 1 crrecreereerrerrereenees CA/ 81	1 pF	—
Capacité grille n° 1/ filament n CE,/f	0.15 pF	—
Tension d'anode à courant nul Vabl	550 V	—
Tension de crête d'anode+amerencenensenn VRCI	2500 V	—
T'ension inverse de crête d'anode Vaicr	500 V	—
Tension de grille n° 2 à courant nul ... Vg,bl	550 V	—
Tension de grille n° 2 ereerececrieneeneencenr VEZ	250 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Dissipation de grille n° 2 Pg	2.5 W	—
Courant de cathode Ik	75 mA	—
Tension entre filament et cathode Vfk	200 V	—
d'anode inférieure à 4,5 W, la limite de la tension d'anode est de	450 V	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacité d'entrée seeermmenmesmsnnnnn Ce	11 pF	—
Capacité de S0ItIE..... rirrereremiernnenenenenes CS	5.9 pF	—



TUBE TINKER
ELECTRON TUBE DATABASE

SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1973 Mazda Valves Binder 2

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

1973 MAZDA VALVES BINDER 2

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	16.5 V	Published nominal value
Heater current	300 mA	Published nominal value
Transconductance	9000 μ S	Published operating characteristic

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate dissipation	9 W	Published maximum rating
Application	Audio or frame time-base output	Printed source application

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1999 Philips E-Z

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

1999 PHILIPS E-Z

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacitances 081	11 pF	Capacitances 081 = 11 pF