



ELECTRONIC TUBE REFERENCE

PCF802

Voltage Triode Pentode electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Triode-pentode for television line-scan oscillator and power-amplifier service; both sections have low plate-dissipation ratings below the project power threshold.

GENERAL CHARACTERISTICS

BASE DESIGNATION	B9A	BASE PINS	9
NOMINAL HEATER	9 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	400000 Ω
TRANSCONDUCTANCE	0.0055 S
AMPLIFICATION FACTOR	47
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	1.2 W
MAXIMUM SCREEN DISSIPATION	2.5 W
MAXIMUM CATHODE CURRENT	15 mA
Pentode section; promoted values are taken from the approved source where explicitly published.	

SECTION2 Triode	
PLATE RESISTANCE	20000 Ω
TRANSCONDUCTANCE	0.0035 S
AMPLIFICATION FACTOR	70
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	1.4 W
MAXIMUM CATHODE CURRENT	10 mA
<i>Triode section; promoted values are taken from the approved source where explicitly published.</i>	

Triode-pentode for television line-scan oscillator and power-amplifier service.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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 (cathodes isolees du filament)	9 V	Pentode
Alimentation du filament en serie {If	300 mA	Pentode

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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	100 V	PentodeSection
Screen voltage	100 V	PentodeSection
Control-grid voltage	-1 V	PentodeSection
Plate current	6 mA	PentodeSection
Screen current	1.7 mA	PentodeSection

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	5500 μS	Section2
Plate resistance	400000 Ω	Section2
Amplification factor	47	Section2

1963 PHILIPS ELECTRON TUBES HANDBOOK V1

Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	200 V	TriodeSection
Control-grid voltage	-2 V	TriodeSection
Plate current	3.5 mA	TriodeSection

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	3500 μS	Section1
Plate resistance	20000 Ω	Section1
Amplification factor	70	Section1



TUBE TINKER
ELECTRON TUBE DATABASE

SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1968 Mazda Belvu

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1968 MAZDA BELVU

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	8 V	Nominal
HeaterCurrentNominal	300 mA	Nominal
Maximum Plate Voltage	550 V	—
Maximum Screen Voltage	250 V	—
Maximum Plate Dissipation	—	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Screen Dissipation	2.5 W	—
Maximum Cathode Current	80 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	10000 μ S	Typical
Plate Resistance	20000 ohm	Typical

1968 MAZDA BELVU

Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	8 V	Nominal
HeaterCurrentNominal	300 mA	Nominal
Maximum Plate Voltage	300 V	—
Maximum Plate Dissipation	1.5 W	—
Maximum Cathode Current	20 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	5000 μ S	Typical
Amplification Factor	50	Typical
Plate Resistance	18000 ohm	Typical



TUBE TINKER
ELECTRON TUBE DATABASE

SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1972 Philips Receiving Tubes

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1972 PHILIPS RECEIVING TUBES

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	SineWaveOscillator_PulseShaper text	—

1972 PHILIPS RECEIVING TUBES

Section 2 · Triode

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	ReactanceTube text	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

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 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Current Ih	3 A	—
Heater Voltage Vh	9 V	—
Maximum Anode Dissipation parmax 14	—	—
Maximum Screen Grid Dissipation pg_(maxi —	—	—
Maximum Anode Supply Voltage Vaib)max 550	550 V	—
Maximum Anode Voltage Va(max) 250	250 V	—
Maximum Screen Grid Supply Voltage Vg,(b)max —	550 V	—
Maximum Screen Grid Voltage Vg(max) —	250 V	—
Maximum Cathode Current Ik(max) 10	15 mA	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
* Maximum Duty Factor 30 per cent, maximum pulse duration	30 μ s	—
Grid 1 to Heater $c_{g,h} < 0.1$	1 pF	—
I Pa (max)=1	2 W	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
To avoid hum interference the A.C. component should not exceed	65 V	—
Input $t_{in} 2.4$	5.4 pF	—
Anode to Grid 1 $c_{a-g1} 1.5$	0.06 pF	—
Anode Voltage $V_a 200$	100 V	—
Screen Grid Voltage V_{g2} —	100 V	—
Control Grid Voltage V_{g1} , -20 --1	0 V	—
Anode Current $I_a 35$	60 mA	—
Screen Grid Current I_{g2} —	17 mA	—
Mutual Conductance $g_m 3.5$	-5 mA	—
Anode Current at $V_{g1} = 0$ V —	12.5 mA	—
Screen Grid Current at $V_{S1} = 0$ V	3.5 mA	—
Anode Current at $I_{g2} = -10 \mu A$, $V_a =$	200 V	—
Negative Grid Voltage at $V_a = V_{g2} = 200$ V. $I_a = 10 \mu A$ —	16 V	—
Negative Grid Voltage at $I_{g2} = -10 \mu A$ —	13 V	—
$I_{g2} = -10 \mu A$ —	5 v	—



SOURCE DATA APPENDIX

1975 RCA RC30

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1975 RCA RC30

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply voltage	650 V	—
Screen-grid supply voltage	650 V	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	100 V	ClassA
Screen-grid voltage	100 V	ClassA
Plate current	6 mA	ClassA
Screen-grid current	1.7 mA	ClassA
Input impedance at 60 Hz	300 kohm	60Hz

1975 RCA RC30

Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply voltage	550 V	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	200 V	ClassA
Grid No.1 voltage	-2 V	ClassA
Plate current	3.5 mA	ClassA
Input impedance at 60 Hz	50 kohm	60Hz



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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode current I _a	6 mA	—
Transconductance S	5.5 mA/V	—
Internal resistance R _i	400 kΩ	—
Grid No.1 voltage V _{g1} -1 0 max.-16 max	-1.3 V	—
Grid No. 1 current I _{g1}	~ 0.3 μA	—
Grid circuit impedance Z _g (f	50 Hz	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to all except anode C _{g1(a)}	5.4 pF	—
Anode to grid No. 1 C _{ag1}	0.06 pF	—
Grid No.1 to heater C _{g1f} max	0.1 pF	—

1999 PHILIPS E-Z
Section 2 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode current I _a	3.5 mA	—
Transconductance S	3.5 mA/V	—
Heater current I _f	300 mA	—
Heater voltage V _h	9 V	—
Grid to all except anode C _{g(a)}	2.4 pF	—
Anode to grid C _{ag}	1.5 pF	—
Grid to heater C _{gf} max	0.1 pF	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode voltage V_a , 200 200	200 V	—
Grid voltage V_g -2 - max.—	-1.3 V	—
Grid current I_g - 10	0.3 μ A	—
Anode dissipation max	1.4 W	—
Cathode current max	10 mA	—
Cathode to heater voltage V_{ih} max	100 V	—
Grid circuit impedance Z_g (f	50 Hz	—
2) To avoid hum interference the A.C. component of V_g should not exceed	65 V	—
1000 μ V when the A.C. component of V_{ih} does not exceed	25 V	—
$I_{L4} = I_{HA++}$	-10 V	—
$L_{1L} f \backslash \backslash) V_g$	100 V	—
$\backslash y$	-5 V	—
$\backslash L v ST T 3$	-10 V	—
L_i	-50 V	—