



ELECTRONIC TUBE REFERENCE

UL41

Power - Pentode Single (NOT beam) (under 10W) electronic tube

CONSOLIDATED TECHNICAL
DATA

1 SECTION
CONSTRUCTION
PENTODE

Series-heater power pentode providing approximately 4 W Class A audio output in transformerless radios.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	8
NOMINAL HEATER	45 V / 100 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	0.0095 S
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	9 W
MAXIMUM SCREEN DISSIPATION	1.75 W
MAXIMUM CATHODE CURRENT	75 mA
<i>Power pentode; promoted characteristics use the 165 V nominal operating column.</i>	

Power pentode for Class A low-frequency audio output amplification.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1951 Mullard Valve and Service Manual

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

1951 MULLARD VALVE AND SERVICE MANUAL

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode Voltage	100 V	ClassA; OneTube
Screen Voltage	100 V	ClassA; OneTube
Control Grid Voltage	-5.7 V	ClassA; OneTube
Anode Current	29 mA	ClassA; OneTube
Screen Current	5.5 mA	ClassA; OneTube
Optimum Load	3000 ohm	ClassA; OneTube
Power Output	1.35 W	ClassA; OneTube
Anode Voltage	200 V	PushPull; TwoTubes
Power Output	12.5 W	PushPull; TwoTubes
Anode-to-Anode Load	4000 ohm	PushPull; TwoTubes

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input Capacitance	11 pF	—
Output Capacitance	8.3 pF	—
Control Grid to Anode Capacitance	1 pF	Maximum

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	165 V	Nominal
Screen Voltage	165 V	Nominal
BiasResistor	140 0hm	AutomaticBias
Plate Current	54.5 mA	Nominal
Screen Current	9 mA	Nominal
OutputPower	3.8 W	Nominal
Total Distortion	10 percent	Nominal
Load Impedance	3000 0hm	Nominal

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input Capacitance	12.3 pF	—
Output Capacitance	9.3 pF	—
Plate To Grid Capacitance	1 pF	Maximum



TUBE TINKER
ELECTRON TUBE DATABASE

SOURCE DATA APPENDIX

1957 Philips Receiving and Amplifying Tubes

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

1957 PHILIPS RECEIVING AND AMPLIFYING TUBES

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	170 V	ClassA
Plate Current	53 mA	ClassA
Screen Current	10 mA	ClassA
Power Output	4 W	ClassA,10PercentDistortion

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	9500 μ S	ClassA
Plate Resistance	20000 ohm	ClassA



SOURCE DATA APPENDIX

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

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode capacitance	8.3 pF	—
Control-grid capacitance	11 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	100 V	ClassA
Screen voltage	100 V	ClassA
Plate current	29 mA	ClassA; PlateVoltage=100V
Screen current	5.5 mA	ClassA; PlateVoltage=100V
Plate voltage	170 V	ClassA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen voltage	170 V	ClassA
Plate current	53 mA	ClassA; PlateVoltage=170V
Screen current	10 mA	ClassA; PlateVoltage=170V
Plate voltage	170 V	ClassAB; PushPull; TwoTubes
Power output	11.5 W	ClassAB; PushPull; TwoTubes

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	8000 uS	ClassA; PlateVoltage=100V
Plate resistance	18 kOhm	ClassA; PlateVoltage=100V
Transconductance	9500 uS	ClassA; PlateVoltage=170V
Plate resistance	20 kOhm	ClassA; PlateVoltage=170V



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1967 Mullard Receiving Tubes for Maintenance

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

1967 MULLARD RECEIVING TUBES FOR MAINTENANCE

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
9W. and with	100 mA	Published in approved UL41.pdf target datasheet; Section1
I. 29 53	45 mA	Published in approved UL41.pdf target datasheet; Section1
Ig z 5.5 10	8.5 mA	Published in approved UL41.pdf target datasheet; Section1
gm 8.0 9.5 8	2 mA	Published in approved UL41.pdf target datasheet; Section1
(Pout =	50 mW	Published in approved UL41.pdf target datasheet; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
I_a (o l 2 x24 2 x44 2 x	45 mA	Published in approved UL41.pdf target datasheet; Section1
I_r (m ax. sig.) 2 x27 2 x49 2 x	53 mA	Published in approved UL41.pdf target datasheet; Section1
I_g 2.10 1 2 x4 .6 2 x8 .8 2 x	9 mA	Published in approved UL41.pdf target datasheet; Section1
I_g z (max . sig .) 2 x 6.8 2 X 16 .5 2 x	19 mA	Published in approved UL41.pdf target datasheet; Section1
9W , and with	100 mA	Published in approved UL41.pdf target datasheet; Section1
9W, and with	100 mA	Published in approved UL41.pdf target datasheet; Section1
9W , and with	100 mA	Published in approved UL41.pdf target datasheet; Section1


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Power Output	4 W	ClassA;OneTube;Plate 170 V;Screen 170 V;Load 3 kohm


SOURCE DATA APPENDIX

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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacitances Ca	8.3 a	Capacitances Ca = 8,3 pF
Capacitances Ca	8.3 a	Capacitances Ca = 8,3 pi