



ELECTRONIC TUBE REFERENCE

4654

Power - Pentode (NOT beam) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

PENTODE

High-transconductance Philips output pentode capable of approximately 9 W single-ended Class A audio power.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	8
NOMINAL HEATER	6.3 V / 1.35 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Pentode	
PLATE RESISTANCE	22000 Ω
TRANSCONDUCTANCE	0.0085 S
AMPLIFICATION FACTOR	11
MAXIMUM PLATE VOLTAGE	600 V
MAXIMUM SCREEN VOLTAGE	425 V
MAXIMUM PLATE DISSIPATION	18 W
MAXIMUM SCREEN DISSIPATION	10 W
MAXIMUM CATHODE CURRENT	120 mA
<i>Published ratings/characteristics promoted from the approved source.</i>	

Indirectly heated output pentode.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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

Section 1 · Pentode

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Audio output	—



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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	6.3 V	Nominal
HeaterCurrentNominal	1.35 A	Nominal
Maximum Plate Voltage	600 V	—
Maximum Plate Dissipation	18 W	—



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	250 V	ClassA
Screen voltage	275 V	ClassA
Cathode resistor	175 ohm	ClassA
Plate current	72 mA	ClassA
Screen current	8 mA	ClassA
Load resistance	3.5 kOhm	ClassA
Power output	9.2 W	ClassA
Plate supply voltage	425 V	ClassB; PushPull
Grid bias	-38 V	ClassB; PushPull
Load resistance plate-to-plate	5 kOhm	ClassB; PushPull
Power output	48 W	ClassB; PushPull
Plate supply voltage	425 V	ClassAB; PushPull
Cathode resistor	265 ohm	ClassAB; PushPull
Load resistance plate-to-plate	6.5 kOhm	ClassAB; PushPull
Power output	27.5 W	ClassAB; PushPull

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	8500 uS	ClassA
Plate resistance	22 kOhm	ClassA



1969 Tesla Manual of Electronic Tubes

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

1969 TESLA MANUAL OF ELECTRONIC TUBES

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published nominal value
Heater current	1.35 A	Published nominal value

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate dissipation	18 W	Published maximum rating
Audio output service	PushPull	Class AB push-pull amplifier



SOURCE DATA APPENDIX

1999 Philips 0-D

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

1999 PHILIPS 0-D

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	275 V	ClassA
Screen voltage	275 V	ClassA
Plate current	72 mA	ClassA
Screen current	8 mA	ClassA
Load resistance	3.5 kohm	ClassA
Output power	9.2 W	ClassA

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	8.5 mA/V	ClassA
Plate resistance	22 kohm	ClassA

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	14.5 pF	—
Plate-grid capacitance	0.8 pF	—

TUBE TINKER

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