



ELECTRONIC TUBE REFERENCE

41

Power - Pentode (NOT beam) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

PENTODE

Intermediate-power output pentode designed for audio power-amplifier service. Widely used in receiver output stages, it provides greater load-driving capability than ordinary small-signal pentodes.

GENERAL CHARACTERISTICS

BASE DESIGNATION	6B	BASE PINS	6
NOMINAL HEATER	6.3 V / 400 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Pentode	
PLATE RESISTANCE	75000 Ω
TRANSCONDUCTANCE	0.0021 S
AMPLIFICATION FACTOR	150
MAXIMUM PLATE VOLTAGE	345 V
MAXIMUM SCREEN VOLTAGE	315 V
MAXIMUM PLATE DISSIPATION	9.4 W
MAXIMUM SCREEN DISSIPATION	3.1 W
MAXIMUM CATHODE CURRENT	37.5 mA
<i>Absolute maximum ratings promoted; representative high-voltage Class A characteristics promoted, with lower-voltage and push-pull operating points preserved as parameters.</i>	

Intermediate-power output pentode for audio power-amplifier service.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1937 Raytheon Radio Receiving Tubes

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

1937 RAYTHEON RADIO RECEIVING TUBES

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	250 V	ClassA
Screen Voltage	250 V	ClassA
Grid Voltage	-18 V	ClassA
Plate Current	32 mA	ClassA
Screen Current	5.5 mA	ClassA
Load Resistance	7600 ohm	ClassA
Power Output	3.4 W	ClassA



SOURCE OPERATING CONDITIONS

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1940 RCA

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

1940 RCA

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	6.3 V	Nominal
HeaterCurrentNominal	400 mA	Nominal
Maximum Plate Voltage	250 V	—
Maximum Screen Voltage	250 V	—
Maximum Cathode Current	37.5 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	2200 μ S	Typical
Amplification Factor	150	Typical
Plate Resistance	68000 ohm	Typical



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1948 Brimar Radio Valve Manual

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

1948 BRIMAR RADIO VALVE MANUAL

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	180 V	Point1
Plate Voltage	250 V	Point2
Plate Current	18.5 mA	Point1
Plate Current	32 mA	Point2
Screen Voltage	180 V	Point1
Screen Voltage	250 V	Point2
Power Output	1.5 W	Point1
Power Output	3.4 W	Point2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	1850 μ S	Point1
Transconductance	2300 μ S	Point2
Plate Resistance	81000 ohm	Point1
Plate Resistance	68000 ohm	Point2



SOURCE DATA APPENDIX

1950 Sylvania

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

1950 SYLVANIA
Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	2300 μ S	—



SOURCE DATA APPENDIX

195X General Electric Essential Characteristics

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

195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS
Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	250 V	ClassA
Screen Voltage	250 V	ClassA
Grid Voltage	-18 V	ClassA
Plate Current	32 mA	ClassA
Screen Current	5.5 mA	ClassA
Load Resistance	7600 ohm	ClassA
Power Output	3.4 W	ClassA



SOURCE DATA APPENDIX

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
Power Output	4.5 W	ClassA1
Power Output	10.5 W	PushPull



SOURCE DATA APPENDIX

1968 General Electric Co

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

1968 GENERAL ELECTRIC CO

Section 1 · Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid 1 to plate capacitance	0.5 pF	—
Input capacitance	5.5 pF	—
Output capacitance	6 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
D-C heater-cathode voltage maximum	100 V	—
Maximum-signal plate current	28 mA	ClassA;Plate315V;Screen285V
Load resistance	9000 ohm	ClassA;Plate315V;Screen285V
Maximum-signal power output	4.5 W	ClassA;Plate315V;Screen285V

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	104000 ohm	ClassA;Plate100V;Screen100V
Transconductance	1500 uS	ClassA;Plate100V;Screen100V
Zero-signal plate current	25.5 mA	ClassA;Plate315V;Screen285V