

ELECTRONIC TUBE REFERENCE

3V4

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

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Directly heated miniature power-output pentode for battery-operated audio amplifiers. Its low filament demand and compact construction provide useful low-frequency output power in portable equipment.

GENERAL CHARACTERISTICS

BASE DESIGNATION	6BX	BASE PINS	7
NOMINAL HEATER	2.8 V / 50 mA	PARALLEL HEATER	1.4 V / 100 mA
HEATING	Direct	SERIES OPERATION	Capable
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

6BX - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – F	–	F – Filament	CONNECTED
PIN2 – P	A	P – Plate (Anode)	CONNECTED
PIN3 – G2	A	G2 – Screen Grid	CONNECTED
PIN4 – IC	–	–	IC
PIN5 – G3	A	G3 – Suppressor Grid	CONNECTED
PIN5 – FCT	–	FCT – Filament Center Tap	CONNECTED
PIN6 – G1	A	G1 – Control Grid	CONNECTED
PIN7 – F	–	F – Filament	CONNECTED

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	100000 Ω
TRANSCONDUCTANCE	0.00215 S
MAXIMUM PLATE VOLTAGE	90 V
MAXIMUM SCREEN VOLTAGE	90 V
MAXIMUM PLATE DISSIPATION	1 W
MAXIMUM CATHODE CURRENT	12 mA
<i>Promoted design-center maximum ratings and a representative 90 V Class A characteristic point; alternate published operating points preserved as parameters.</i>	

Directly heated miniature power-output pentode for battery-operated audio amplifiers.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1958 Brimar Radio Valve No 7

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

1958 BRIMAR RADIO VALVE NO 7

Section 1 · Pentode

APPLICATION

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Battery audio output	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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	90 V	ClassA;ParallelFilaments
Screen-grid voltage	90 V	ClassA;ParallelFilaments
Grid No.1 bias	4.5 V	ClassA;ParallelFilaments
Plate current	9.5 mA	ClassA;ParallelFilaments
Screen-grid current	2.1 mA	ClassA;ParallelFilaments
Plate resistance	100000 ohm	ClassA;ParallelFilaments
Transconductance	2150 uS	ClassA;ParallelFilaments
Load resistance	10000 ohm	ClassA;ParallelFilaments
Power output	0.27 W	ClassA;ParallelFilaments
Plate voltage	85 V	ClassA;ParallelFilamentsLowVoltage

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen-grid voltage	85 V	ClassA;ParallelFilamentsLowVoltage
Grid No.1 bias	5 V	ClassA;ParallelFilamentsLowVoltage
Plate current	6.9 mA	ClassA;ParallelFilamentsLowVoltage
Screen-grid current	1.5 mA	ClassA;ParallelFilamentsLowVoltage
Plate resistance	120000 ohm	ClassA;ParallelFilamentsLowVoltage
Transconductance	1975 uS	ClassA;ParallelFilamentsLowVoltage
Load resistance	10000 ohm	ClassA;ParallelFilamentsLowVoltage
Power output	0.25 W	ClassA;ParallelFilamentsLowVoltage
Plate voltage	90 V	ClassA;SeriesFilaments
Screen-grid voltage	90 V	ClassA;SeriesFilaments
Grid No.1 bias	4.5 V	ClassA;SeriesFilaments
Plate current	7.7 mA	ClassA;SeriesFilaments
Screen-grid current	1.7 mA	ClassA;SeriesFilaments
Plate resistance	120000 ohm	ClassA;SeriesFilaments
Transconductance	2000 uS	ClassA;SeriesFilaments
Load resistance	10000 ohm	ClassA;SeriesFilaments
Power output	0.24 W	ClassA;SeriesFilaments



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	2150 uS	Typical

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Power Output	0.27 W	Typical



SOURCE OPERATING CONDITIONS

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1966 Tung Sol Electronic Tubes 1 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 1 OF 4

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament voltage series	2.8 V	Series
Filament current series	50 mA	Series
Filament voltage parallel	1.4 V	Parallel
Filament current parallel	100 mA	Parallel
Plate voltage	90 V	AudioOutput;ClassA
Screen voltage	90 V	AudioOutput;ClassA
Control-grid voltage	-7 V	AudioOutput;ClassA
Plate current	9.5 mA	AudioOutput;ClassA
Screen current	2 mA	AudioOutput;ClassA
Load resistance	8000 Ω	AudioOutput;ClassA
Power output	0.25 W	AudioOutput;ClassA



SOURCE OPERATING CONDITIONS

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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	0.2 pF	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	5.5 pF	—
Output capacitance	3.8 pF	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	100000 ohm	ClassA;ParallelFilament;Plate90V;Screen90V
Transconductance	2150 uS	ClassA;ParallelFilament;Plate90V;Screen90V
Zero-signal plate current	9.5 mA	ClassA;ParallelFilament;Plate90V;Screen90V
Zero-signal screen current	2.1 mA	ClassA;ParallelFilament;Plate90V;Screen90V

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Load resistance	10000 ohm	ClassA
Maximum-signal power output	0.27 W	ClassA;ParallelFilament;Plate90V;Screen90V