

ELECTRONIC TUBE REFERENCE

7591

Power - Beam (NOT sweep) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
BEAMPOWER

Beam-power pentode designed for audio-frequency power amplification, providing substantial output power with comparatively modest grid-drive voltage.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	8
NOMINAL HEATER	6.3 V / 800 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Beam Power	
PLATE RESISTANCE	29000 Ω
TRANSCONDUCTANCE	0.0102 S
AMPLIFICATION FACTOR	16.8
MAXIMUM PLATE VOLTAGE	550 V
MAXIMUM SCREEN VOLTAGE	440 V
MAXIMUM PLATE DISSIPATION	19 W
MAXIMUM SCREEN DISSIPATION	3.3 W
MAXIMUM CATHODE CURRENT	85 mA
Published ratings and characteristics mapped semantically; identical repeated sections compressed.	

The 7591 is a beam-power pentode designed for audio-frequency power-amplifier applications, offering substantial output power with comparatively modest drive voltage.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1950 Sylvania

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

1950 SYLVANIA

Section 1 · Beam Power

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Power output maximum	43 W	PushPull



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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 · Beam Power

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Power Output	19 W	ClassA1;Typical

CAPACITANCE

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid To Plate Capacitance	0.25 pF	—
Input Capacitance	10 pF	—
Output Capacitance	5 pF	—



1965 Sylvania Electronic Tubes Vol3

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

1965 SYLVANIA ELECTRONIC TUBES VOL3

Section 1 · Beam Power

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	800 mA	—
Transconductance	10200 μ S	—
Plate Resistance	29000 ohm	—
Amplification Factor	16.8	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	300 V	ClassA
Screen Voltage	300 V	ClassA
Grid Voltage	-10 V	ClassA
PlateCurrentZeroSignal	60 mA	ClassA
PlateCurrentMaximumSignal	75 mA	ClassA
ScreenCurrentZeroSignal	8 mA	ClassA
ScreenCurrentMaximumSignal	15 mA	ClassA
Load Resistance	3000 ohm	ClassA
Power Output	11 W	ClassA
Power Output	32 W	TwoTubes;PushPull;ClassAB;UltraLinear;PlateSupply=400V
Power Output	43 W	TwoTubes;PushPull;ClassAB;Plate=450V



1966 Tung Sol Electronic Tubes 4 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 4 OF 4
Section 1 · Beam Power

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 VOLTS	PublishedTable
With Cathode Bias	7 MEGOHMS	PublishedTable
Heater Current	80 AMP	PublishedTable
Plate Voltage	300 VOLTS	PublishedTable
Screen Voltage	300 VOLTS	PublishedTable
Grid #1 Voltage	1 VOLTS	PublishedTable
Peak Af Grid Voltage	10 VOLTS	PublishedTable
Plate Current (Zero Signal)	60 MA	PublishedTable
Screen Current (Zero Signal)	8 MA	PublishedTable
Transconductance	10200 uMHOS	PublishedTable
Plate Resistance	0 OHMS	PublishedTable
Load Resistance	3000 OHMS	PublishedTable
Power Output	11 WATTS	PublishedTable
Total Harmonic Distortion	13 PERCENT	PublishedTable
Plate Supply Voltage	450 VOLTS	PublishedTable

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	550 VOLTS	PublishedTable
Maximum Screen Voltage	440 VOLTS	PublishedTable
Maximum Plate Dissipation	19 WATTS	PublishedTable
Maximum Scre En Dissipationa	3.3 WATTS	PublishedTable
Maximum Cathode Current	85 MA	PublishedTable
Plate Current (Max. Signal)	75 MA	PublishedTable
Screen Current (Max. Signal)	15 MA	PublishedTable