

ELECTRONIC TUBE REFERENCE

6EX6

Power - TV Horizontal Output (sweep) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
BEAMPOWER

Beam-power pentode designed for horizontal-deflection service in wide-angle television receivers, emphasizing high plate current at low electrode voltages.

GENERAL CHARACTERISTICS

BASE DESIGNATION	5BT	BASE PINS	5
NOMINAL HEATER	6.3 V / 2.25 A	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

5BT - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – IS	A	IS – Internal Screen	CONNECTED
PIN2 – H	–	H – Heater	CONNECTED
PIN3 – G3	A	G3 – Suppressor Grid	CONNECTED
PIN3 – K	A	K – Cathode	CONNECTED
PIN5 – G1	A	G1 – Control Grid	CONNECTED
PIN7 – H	–	H – Heater	CONNECTED
PIN8 – G2	A	G2 – Screen Grid	CONNECTED
CAP1 – P	A	P – Plate (Anode)	CONNECTED

SECTION RATINGS

SECTION1 Beam Power	
PLATE RESISTANCE	20000 Ω
TRANSCONDUCTANCE	0.006 S
MAXIMUM PLATE VOLTAGE	700 V
MAXIMUM SCREEN VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	17.5 W
MAXIMUM SCREEN DISSIPATION	1.5 W
MAXIMUM CATHODE CURRENT	110 mA
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
WARM-UP TIME	11 s
<i>Published promoted fields populated from the printed semantic headings.</i>	

The 6EX6 is a beam-power pentode for horizontal-deflection amplifier service in large-deflection-angle television receivers, emphasizing high plate current at low electrode voltages.



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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage..... ... 6.3 21.5 Volts	21.5 V	Heater Voltage..... 6.3 21.5 Volts
Heater Current. 2.25 0.6 Amperes	600 mA	Heater Current. 2.25 0.6 Amperes
Plate Voltage. 175 Volts	175 V	Plate Voltage. 175 Volts
Grid No. 2 Voltage. 0, 175 Volts	175 V	Grid No. 2 Voltage. 0, 175 Volts
Grid No. 1 Voltage. i, -30 Volts	-30 V	Grid No. 1 Voltage. i, -30 Volts
Plate Current. e e 67 Ma	67 mA	Plate Current. e e 67 Ma
Grid No. 2 Current. i 3.3 Ma	3.3 mA	Grid No. 2 Current. i 3.3 Ma
Transconductance. e 7700 umhos	7700 umhos	Transconductance. e 7700 umhos
Plate Resistance. i 8500 Ohms	8500 Ohms	Plate Resistance. i 8500 Ohms
No. 2 voltage, plus a high ratio of plate to Grid No. 2 current.	2 V	No. 2 voltage, plus a high ratio of plate to Grid No. 2 current.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
(Boost + D C Power Supply)..... 770 Volts Max.	770 V	(Boost + D C Power Supply)..... 770 Volts Max.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Positive Plate Voltage (Abs. Max.). 7000 Volts	7000 V	Peak Positive Plate Voltage (Abs. Max.). 7000 Volts
Peak Negative Plate Voltage (Abs. Max.). 1500 Volts	1500 V	Peak Negative Plate Voltage (Abs. Max.). 1500 Volts
Grid No. 2 Voltage. i, 195 Volts Max.	195 V	Grid No. 2 Voltage. i, 195 Volts Max.
Peak Negative Grid No. 1 Voltage.. 220 Volts Max.	220 V	Peak Negative Grid No. 1 Voltage.. 220 Volts Max.
Plate Dissipation4. 22 Watts Max.	22 W	Plate Dissipation4. 22 Watts Max.
Grid No. 2 Dissipation. 3.5 Watts Max.	3.5 W	Grid No. 2 Dissipation. 3.5 Watts Max.
Average Cathode Current. 220 Ma Max.	220 mA	Average Cathode Current. 220 Ma Max.
Peak Cathode Current. 770 Ma Max.	770 mA	Peak Cathode Current. 770 Ma Max.
Grid No. 1 Circuit Resistance. 0.47 Megohm Max.	0.47 Megohm	Grid No. 1 Circuit Resistance. 0.47 Megohm Max.
5. Amplification factor with tube operating as a triode with 175 volts on the	175 V	5. Amplification factor with tube operating as a triode with 175 volts on the



SOURCE DATA APPENDIX

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PeakPositivePlateVoltage	6000 V	HorizontalDeflection



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1966 Tung Sol Electronic Tubes 2 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 2 OF 4

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum_DC_plate_supply_voltage	770 V	—
Maximum_peak_negative_plate_voltage	1500 V	—
Maximum_peak_cathode_current	770 mA	—
Plate_voltage	175 V	ClassA
Screen_voltage	175 V	ClassA
Grid_1_voltage	-30 V	ClassA

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-1-to-plate capacitance	1.1 pF	—
Input capacitance	22 pF	—
Output capacitance	8.5 pF	—