

ELECTRONIC TUBE REFERENCE

6DT5

Power - TV Vertical Output electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
BEAMPOWER

Beam-power pentode designed as the vertical-deflection output amplifier in television receivers using 110-degree picture tubes, with scanning-oriented pulse ratings.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9NX	BASE PINS	9
NOMINAL HEATER	6.3 V / 1.2 A	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

9NX - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1	F	P – Plate (Anode)	CONNECTED
PIN2	E	P – Plate (Anode)	CONNECTED
PIN3	D	P – Plate (Anode)	CONNECTED
PIN4	–	H – Heater	CONNECTED
PIN5	–	H – Heater	CONNECTED
PIN6	–	K – Cathode	CONNECTED
PIN7	C	P – Plate (Anode)	CONNECTED
PIN8	B	P – Plate (Anode)	CONNECTED
PIN9	A	P – Plate (Anode)	CONNECTED

SECTION RATINGS

SECTION1 Beam Power	
TRANSCONDUCTANCE	0.0062 S
MAXIMUM PLATE VOLTAGE	315 V
MAXIMUM SCREEN VOLTAGE	285 V
MAXIMUM PLATE DISSIPATION	9 W
MAXIMUM SCREEN DISSIPATION	2 W
MAXIMUM CATHODE CURRENT	55 mA
<i>Vertical-deflection beam-power section.</i>	

The 6DT5 is a beam-power pentode designed as a vertical-deflection output amplifier in television receivers using 110-degree picture tubes.



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
Peak Positive Pulse Plate Voltage	2200 V	Absolute maximum
Peak Cathode Current	190 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	44 mA	250 V plate and screen

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-Plate Capacitance	0.57 pF	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1965 Westinghouse Data Book

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

1965 WESTINGHOUSE DATA BOOK

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage maximum	315 V	—
Peak positive pulse plate voltage maximum	2200 V	Pulse

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid2 dissipation maximum	2 W	—
Typical grid2 voltage	150 V	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid1 cutoff voltage	-35 V	—

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Vertical-deflection output amplifier	—


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.57 pF	—
Input capacitance	12.5 pF	—
Output capacitance	4.9 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA1
Screen voltage	250 V	ClassA1
Grid 1 voltage	-16.5 V	ClassA1
Plate current	44 mA	ClassA1


SOURCE DATA APPENDIX

1971 RCA HB3 Binder 4 of 7

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

1971 RCA HB3 BINDER 4 OF 7

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	1.2 A	—
Maximum plate voltage	315 V	VerticalDeflection
Peak positive pulse plate voltage	2200 V	VerticalDeflection
Maximum screen voltage	285 V	VerticalDeflection
Peak cathode current	190 mA	VerticalDeflection
Average cathode current	55 mA	VerticalDeflection
Plate dissipation	9 W	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA
Screen voltage	250 V	ClassA
Grid voltage	-16.5 V	ClassA
Plate current	44 mA	ClassA
Screen current	1.5 mA	ClassA
Transconductance	6200 uS	ClassA

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.57 pF	—
Input capacitance	12.5 pF	—
Output capacitance	4.9 pF	—



1975 RCA RC30

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

1975 RCA RC30

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) 6.3	12.6 V	Published in approved 12DT5 target entry; Section1
Heater Current 1.2	600 mA	Published in approved 12DT5 target entry; Section1
Heater Warm-up Time (Average)	11 seconds	Published in approved 12DT5 target entry; Section1
of	100 mA	Published in approved 12DT5 target entry; Section1
of 100 mA — —	-35 V	Published in approved 12DT5 target entry; Section1
DC Plate Voltage	315 V	Published in approved 12DT5 target entry; Section1
Grid-No.2 (Screen-Grid) Voltage	285 V	Published in approved 12DT5 target entry; Section1
Peak Negative-Pulse Grid-No.1 (Control-Grid) Voltage	250 V	Published in approved 12DT5 target entry; Section1
Peak Cathode Current	190 mA	Published in approved 12DT5 target entry; Section1
Average Cathode Current	55 mA	Published in approved 12DT5 target entry; Section1
Grid-No.2 Input	2 W	Published in approved 12DT5 target entry; Section1
For fixed-bias operation	0.5 MΩ	Published in approved 12DT5 target entry; Section1
For cathode-bias operation	1 MΩ	Published in approved 12DT5 target entry; Section1
Heater Voltage (ac/dc) 3.16 4.2	6.3 V	Published in approved 12DT5 target entry; Section1
Heater Current 0.6 0.45	300 mA	Published in approved 12DT5 target entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	330 V	Published in approved 12DT5 target entry; Section1
Grid-No.3 Voltage	28 V	Published in approved 12DT5 target entry; Section1
Grid-No.2 Supply Voltage	330 V	Published in approved 12DT5 target entry; Section1
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0 V	Published in approved 12DT5 target entry; Section1
Plate Dissipation	1.7 W	Published in approved 12DT5 target entry; Section1
For grid-No.2 voltages up to	165 V	Published in approved 12DT5 target entry; Section1
For grid-No.2 voltages up to 165 volts	1.1 W	Published in approved 12DT5 target entry; Section1
For grid-No.2 voltages between 165 and	330 V	Published in approved 12DT5 target entry; Section1
For fixed-bias operation	0.25 MΩ	Published in approved 12DT5 target entry; Section1
For cathode-bias operation	0.5 MΩ	Published in approved 12DT5 target entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage 60 80	250 V	Published in approved 12DT5 target entry; Section1
0	16.5 V	Published in approved 12DT5 target entry; Section1
Transconductance	6200 μS	Published in approved 12DT5 target entry; Section1
Plate Current 95* 195<	44 mA	Published in approved 12DT5 target entry; Section1
Grid-No.2 Current 8.5> 19*	1.5 mA	Published in approved 12DT5 target entry; Section1
Plate Supply Voltage	160 V	Published in approved 12DT5 target entry; Section1
Grid-No.2 (Screen-Grid) Supply Voltage	100 V	Published in approved 12DT5 target entry; Section1
Cathode-Bias Resistor	560 Ω	Published in approved 12DT5 target entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance (Approx.)	0.15 MΩ	Published in approved 12DT5 target entry; Section1
Transconductance, Grid No.1 to Plate	1350 μS	Published in approved 12DT5 target entry; Section1
Grid-No.2 Current	1.8 mA	Published in approved 12DT5 target entry; Section1
Grid-No.1 Voltage (Approx.) for plate current of 10 tiA	-5.2 V	Published in approved 12DT5 target entry; Section1
Grid-No.3 Voltage (Approx.) for plate current of 10 fiA	-4.2 V	Published in approved 12DT5 target entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to Plate	0.02 pF	Published in approved 12DT5 target entry; Section1
Internal Shield	5.8 pF	Published in approved 12DT5 target entry; Section1
Grid No.3 to Plate	1.7 pF	Published in approved 12DT5 target entry; Section1
Grid No.1 to Grid No.3	0.1 pF	Published in approved 12DT5 target entry; Section1
Internal Shield	6.1 pF	Published in approved 12DT5 target entry; Section1

TUBE TINKER

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