

ELECTRONIC TUBE REFERENCE

6DN7

Power - TV Vertical Output electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

TRIODE-TRIODE

Dual triode intended for television vertical-deflection service, combining oscillator/driver and power-output functions where applicable. Manufacturer data emphasize vertical-sweep operation, pulse-voltage capability, and the stronger section's current and dissipation requirements.

GENERAL CHARACTERISTICS

BASE DESIGNATION	8BD	BASE PINS	8
NOMINAL HEATER	6.3 V / 900 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

8BD - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – 2G1	B	G1 – Control Grid	CONNECTED
PIN2 – 2P	B	P – Plate (Anode)	CONNECTED
PIN3 – 2K	B	K – Cathode	CONNECTED
PIN4 – 1G1	A	G1 – Control Grid	CONNECTED
PIN5 – 1P	A	P – Plate (Anode)	CONNECTED
PIN6 – 1K	A	K – Cathode	CONNECTED
PIN7 – H	–	H – Heater	CONNECTED
PIN8 – H	–	H – Heater	CONNECTED

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	9000 Ω
TRANSCONDUCTANCE	0.0025 S
AMPLIFICATION FACTOR	22.5
MAXIMUM PLATE VOLTAGE	350 V
MAXIMUM PLATE DISSIPATION	1 W
MAXIMUM CATHODE CURRENT	20 mA
<i>Higher-mu section.</i>	

SECTION2 Triode	
PLATE RESISTANCE	2000 Ω
TRANSCONDUCTANCE	0.0077 S
AMPLIFICATION FACTOR	15.4
MAXIMUM PLATE VOLTAGE	550 V
MAXIMUM PLATE DISSIPATION	10 W
MAXIMUM CATHODE CURRENT	50 mA
<i>Section 2 vertical-deflection amplifier; 2500 V pulse limit retained as parameter.</i>	

The 6DN7 combines a vertical-deflection oscillator triode with a higher-power vertical-deflection amplifier triode.



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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	250 V	Published operating/characteristic table
Grid Voltage	-9.5 V	Published operating/characteristic table

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	41 mA	Published operating/characteristic table
Transconductance	7700 μ S	Published operating/characteristic table
Amplification Factor	15.4	Published operating/characteristic table
Plate Resistance	2000 ohm	Published operating/characteristic table



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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	TVVerticalDeflection
Grid voltage	-8 V	TVVerticalDeflection
Plate current	8 mA	TVVerticalDeflection

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	4 pF	—
Input capacitance	2.2 pF	—
Output capacitance	0.7 pF	—

1966 TUNG SOL ELECTRONIC TUBES 2 OF 4

Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	TVVerticalDeflection
Grid voltage	-9.5 V	TVVerticalDeflection
Plate current	41 mA	TVVerticalDeflection

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	5.5 pF	—
Input capacitance	4.6 pF	—
Output capacitance	1 pF	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	6.3 V	—
HeaterCurrentNominal	900 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	9000 Ohm	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	2500 μ S	—
Amplification Factor	22.5	—

1968 GENERAL ELECTRIC CO

Section 2 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	2000 Ω m	—
Transconductance	7700 μ S	—
Amplification Factor	15.4	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Positive Pulse Plate Voltage	2500 V	VerticalDeflection
Peak Cathode Current	150 mA	VerticalDeflection



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	900 mA	—
Plate voltage	250 V	Section1;ClassA
Grid voltage	-8 V	Section1;ClassA
Plate current	8 mA	Section1;ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification factor	22.5	Section1
Plate resistance	9000 ohm	Section1
Transconductance	2500 uS	Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	4 pF	Section1

1971 RCA HB3 BINDER 4 OF 7

Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	Section2;ClassA
Grid voltage	-9.5 V	Section2;ClassA
Plate current	41 mA	Section2;ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification factor	15.4	Section2
Plate resistance	2000 ohm	Section2
Transconductance	7700 uS	Section2

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	5.5 pF	Section2



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	260 V	ClassA
Grid voltage	-8 V	ClassA
Plate current	8 mA	ClassA

1975 RCA RC30

Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA
Grid voltage	-9.5 V	ClassA
Plate current	41 mA	ClassA
Peak positive-pulse plate voltage	2500 V	VerticalDeflection
Average cathode current	50 mA	VerticalDeflection