

ELECTRONIC TUBE REFERENCE

6GW6

Power - TV Horizontal Output (sweep) electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
BEAMPOWER

Glass-octal beam-power tube designed as a horizontal-deflection amplifier in television receivers.

GENERAL CHARACTERISTICS

BASE DESIGNATION	6AM	BASE PINS	8
NOMINAL HEATER	6.3 V / 1.2 A	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

6AM - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – Pin 1	–	–	NC · verified
PIN2 – Pin 2	–	H – Heater	CONNECTED · verified
PIN3 – Pin 3	–	–	NC · verified
PIN4 – Pin 4	A	G2 – Screen Grid	CONNECTED · verified
PIN5 – Pin 5	A	G1 – Control Grid	CONNECTED · verified
PIN7 – Pin 7	–	H – Heater	CONNECTED · verified
PIN8 – Pin 8	A	BP – Beam-Forming Plate	CONNECTED · verified
PIN8 – Pin 8	A	K – Cathode	CONNECTED · verified

TERMINAL	SECTION	ELEMENT	STATUS
CAP1 – Top cap	A	P – Plate (Anode)	CONNECTED · verified

SECTION RATINGS

SECTION1 Beam Power	
PLATE RESISTANCE	15000 Ω
TRANSCONDUCTANCE	0.0071 S
AMPLIFICATION FACTOR	4.4
MAXIMUM PLATE VOLTAGE	770 V
MAXIMUM SCREEN VOLTAGE	220 V
MAXIMUM PLATE DISSIPATION	17.5 W
MAXIMUM SCREEN DISSIPATION	3.5 W
MAXIMUM CATHODE CURRENT	175 mA
<i>Published maximum ratings and characteristic values promoted where applicable; additional table values retained in TUBE_SECTION_PARAMETER.</i>	

Glass-octal beam-power tube used as a horizontal-deflection amplifier in television receivers; the source groups the GW6/DQ6B heater variants.



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
Heater voltage	6.3 V	—
Heater current	1.2 A	—
Plate voltage	60250 V	Typical operating conditions
Screen voltage	220 V	Typical operating conditions



SOURCE OPERATING CONDITIONS

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
Transconductance	7100 μ S	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum screen-grid voltage	220 V	—
Maximum plate dissipation	17.5 W	—
Heater voltage	6.3 V	—
Heater current	1.2 A	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak negative pulse plate voltage	1500 V	HorizontalDeflection
Typical plate current	70 mA	—
Typical screen-grid current	2.1 mA	—


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
Peak positive pulse plate voltage	6500 V	HorizontalDeflection;Pulse
Peak negative pulse plate voltage	1500 V	HorizontalDeflection;Pulse
Plate current	70 mA	HorizontalDeflection
Grid 2 current	2 mA	HorizontalDeflection
Grid 1 voltage	-22 V	HorizontalDeflection


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1971 RCA HB3 Binder 5 of 7

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

1971 RCA HB3 BINDER 5 OF 7

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current	70 mA	ClassA
Maximum plate voltage	330 V	—
Maximum screen-grid voltage	330 V	—
DC PLATE-SUPPLY VOLTAGE	770 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
PEAK POSITIVE-PULSE PLATE VOLTAGE ⁴	6500 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
PEAK NEGATIVE-PULSE PLATE VOLTAGE	1500 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
DC GRID-No.2 (SCREEN-GRID) VOLTAGE	220 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
DC GRID-No.1 (CONTROL-GRID) VOLTAGE	-55 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
PEAK NEGATIVE-PULSE GRID-No.1 VOLTAGE	330 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
GRID-No.2 INPUT	3.5 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
PLATE DISSIPATION [°]	17.5 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Heater negative with respect to cathode	200 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Heater positive with respect to cathode	200 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
For grid resistor-bias operation	1 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	15000 ohm	ClassA
Transconductance	7100 uS	ClassA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC) – published value 1	6 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Voltage (AC or DC) – published value 2	3 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Voltage (AC or DC) – published value 3	10 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Current at 6.3 volts – published value 1	6.3 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Current at 6.3 volts – published value 2	1 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Current at 6.3 volts – published value 3	2 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
for plate volts = 150, grid-No.2	150 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
volts = 150, grid-No.1 volts =	150 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid No.1 to plate	5	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
grid No.2, and heater	17	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
grid No.2, and heater	7	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Plate Voltage – published value 1	60 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Plate Voltage – published value 2	250 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid-No.2 Voltage – published value 1	150 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.2 Voltage – published value 2	150 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid-No.1 Voltage – published value 1	0 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid-No.1 Voltage – published value 2	-22.5 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Plate Resistance (Approx 1 – published value 1	1 ohm	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Plate Resistance (Approx 1 – published value 2	15000 ohm	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Transconductance	7100	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Plate Current – published value 1	3906 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Plate Current – published value 2	70 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid-No.2 Current – published value 1	326 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid-No.2 Current – published value 2	2.1 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
plate ma. = 1 – published value 1	1 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
plate ma. = 1 – published value 2	-42 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Pin 2 -Heater – published value 1	2	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Pin 2 -Heater – published value 2	7	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pin 3 -No Connec – published value 1	3	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Pin 3 -No Connec – published value 2	8	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Pin 4 -Grid No.2	4	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Pin 5 -Grid No.i	5	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
GRID-N42 VOLTS=150	150 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
GRID-N°2 MILLIAMPERES ~IC2~	2 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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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
Maximum pulse duration	200 microseconds	Published in approved 17DQ6B target datasheet entry; Section1
be reduced to 100 mAwith a maximum pulse duration of	400 microseconds	Published in approved 17DQ6B target datasheet entry; Section1
Heater Voltage (ac/dc) 6.3 12.6	16.8 V	Published in approved 17DQ6B target datasheet entry; Section1
Heater Current 1.2 0.6	450 mA	Published in approved 17DQ6B target datasheet entry; Section1
Heater Warm-up Time (Average) 11	11 seconds	Published in approved 17DQ6B target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Plate Supply Voltage	770 V	Published in approved 17DQ6B target datasheet entry; Section1
Peak Positive-Pulse Plate Voltage*	6500 V	Published in approved 17DQ6B target datasheet entry; Section1
Peak Negative-Pulse Plate Voltage	1500 V	Published in approved 17DQ6B target datasheet entry; Section1
DC Grid-No.2 (Screen-Grid) Voltage	220 V	Published in approved 17DQ6B target datasheet entry; Section1
DC Grid-No.1 (Control-Grid) Voltage	55 V	Published in approved 17DQ6B target datasheet entry; Section1
Peak Negative-Pulse Grid-No.1 Voltage	330 V	Published in approved 17DQ6B target datasheet entry; Section1
Peak Cathode Current	550 mA	Published in approved 17DQ6B target datasheet entry; Section1
Average Cathode Current	175 mA	Published in approved 17DQ6B target datasheet entry; Section1
Plate Dissipation*	17.5 W	Published in approved 17DQ6B target datasheet entry; Section1
Grid-No.2 Input	3.5 W	Published in approved 17DQ6B target datasheet entry; Section1
Bulb Temperature (At hottest point)	240 °C	Published in approved 17DQ6B target datasheet entry; Section1
Grid-No. 1-Circuit Resistance, for grid-resistor-bias operation	1 MΩ	Published in approved 17DQ6B target datasheet entry; Section1
# Pulse duration must not exceed 15% of a horizontal scanning cycle (	10 microseconds	Published in approved 17DQ6B target datasheet entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to Cathode, Heater, Grid No.2, and Grid No	3 pF	Published in approved 17DQ6B target datasheet entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage 150 60	250 V	Published in approved 17DQ6B target datasheet entry; Section1
C.rid-No.2 Voltage 150 150	150 V	Published in approved 17DQ6B target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No. 1 Voltage -22.5 V	-22.5 V	Published in approved 17DQ6B target datasheet entry; Section1
Plate Resistance (Approx.)	$15000 \text{ }\Omega$	Published in approved 17DQ6B target datasheet entry; Section1
Grid-No.2 Current $32 \text{ }\mu\text{A}$	2.1 mA	Published in approved 17DQ6B target datasheet entry; Section1
1 mA	-42 V	Published in approved 17DQ6B target datasheet entry; Section1

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