

ELECTRONIC TUBE REFERENCE

6S4A

Power - TV Vertical Output electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Miniature medium-mu triode designed as a vertical-deflection amplifier in color and monochrome television receivers. Its increased dissipation and high pulse-voltage capability support demanding sweep-output service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	EIA 9AC	BASE PINS	9
NOMINAL HEATER	6.3 V / 600 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	3700 Ω
TRANSCONDUCTANCE	0.0045 S
AMPLIFICATION FACTOR	16.5
MAXIMUM PLATE VOLTAGE	550 V
MAXIMUM PLATE DISSIPATION	8.5 W
MAXIMUM CATHODE CURRENT	30 mA
Promoted average characteristics are the published 250 V values.	

Miniature type used as vertical-deflection amplifier in color and black-and-white television receivers. Outlines section, 6E; requires miniature 9-contact socket. 9AC



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
Heater voltage	6.3 V	—
Heater current	600 mA	—
Plate voltage	250 V	Typical operating conditions



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 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	600 mA	—
Plate Voltage	250 V	—
Grid Voltage	-8 V	—
Plate Current	26 mA	—
Transconductance	4500 μ S	—
Amplification Factor	16 ratio	—
Plate Resistance	3600 ohm	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	500 V	VerticalDeflection
Maximum Peak Positive Plate Voltage	2200 V	Pulse
Maximum Plate Dissipation	7.5 W	—
Maximum Average Cathode Current	30 mA	—
Maximum Peak Cathode Current	105 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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA
Heater_warmup_time	11 s	TVVerticalDeflection

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	4500 uS	ClassA
Plate_current	30 mA	TVVerticalDeflection

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	3 pF	Section1
Output capacitance	3 pF	Section1


SOURCE DATA APPENDIX

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
Peak Positive Pulse Plate Voltage	2200 V	VerticalDeflection
Peak Negative Grid Voltage	250 V	VerticalDeflection
Peak Cathode Current	105 mA	VerticalDeflection
Plate Voltage	250 V	AverageCharacteristics



SOURCE DATA APPENDIX

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 · Triode

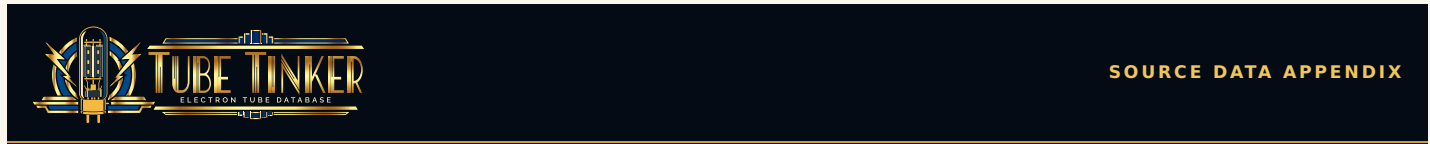
CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
~...~	6.3 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Current – published value 1	600 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Current – published value 2	6 A	Published datasheet value; multiple values represent separate source-table limits or conditions.
Current – published value 3	5 A	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to plate	2.4	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid to cathode and heater	4.2	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate to cathode and heater	0.6	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Voltage	250 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid Voltage	-8 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Resistance (Approx)	3700 ohm	Published datasheet value; multiple values represent separate source-table limits or conditions.
Transconductance	4500	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Current	24 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Current for grid volts = -15 – published value 1	-15 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Current for grid volts = -15 – published value 2	4 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid Voltage (Approx.) for plate $\mu_a = 50$ – published value 1	50 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid Voltage (Approx.) for plate $\mu_a = 50$ – published value 2	-22 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 1 -Internal – published value 1	1	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 1 -Internal – published value 2	5	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Connection–	6	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 2 -Cathode – published value 1	2	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 2 -Cathode – published value 2	1	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 3 -Grid – published value 1	3	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 3 -Grid – published value 2	8	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 4 -Heater – published value 1	4	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 4 -Heater – published value 2	1	Published datasheet value; multiple values represent separate source-table limits or conditions.
0 This rating is applicable where the duration of the voltage pulse does	0 V	Pulse

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC PLATE VOLTAGE	550 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
PEAK POSITIVE-PULSE PLATE VOLTAGE°	2200 V	Pulse
PEAK NEGATIVE-PULSE GRID VOLTAGE	250 V	Pulse
PLATE DISSIPATION – published value 1	8 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
PLATE DISSIPATION – published value 2	5 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater negative with respect to cathode. 200 max	200 V	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater positive with respect to cathode. 2004 max	2004 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
For cathode-bias operation – published value 1	2 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
For cathode-bias operation – published value 2	2 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.



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
Heater Current	0.6 ampere	Published value from supplied target entry
Heater Warm-up Time (Average)	11 seconds	Published value from supplied target entry
Plate Voltage	250 volts	Published value from supplied target entry
Amplification Factor	16.5	Published value from supplied target entry
Plate Resistance (Approx.)	3700 ohms	Published value from supplied target entry
Plate Current	24	Published value from supplied target entry
Plate Current for grid voltage of	4 volts	Published value from supplied target entry
Grid Voltage Approx.) for plate current of	50	Published value from supplied target entry
DC Plate Voltage	550 volts	Published value from supplied target entry
Peak Positive-Pulse Plate Voltage#	2200 volts	Published value from supplied target entry
Peak Negative-Pulse Grid Voltage	250 volts	Published value from supplied target entry
Peak Cathode Current	105 mA	Published value from supplied target entry

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Average Cathode Current	30	Published value from supplied target entry
Plate Dissipation	8.5 watts	Published value from supplied target entry
Grid-Circuit Resistance, for cathode-bias operation	2.2 megohms	Published value from supplied target entry
# Pulse duration must not exceed	2.5	Published value from supplied target entry
Heater Voltage (ac/dc)	12.6 Volts	Published value from supplied target entry
Heater Current	0.15 ampere	Published value from supplied target entry
Peak Heater-Cathode Voltage ±	90 volts	Published value from supplied target entry
Plate Voltage	300 volts	Published value from supplied target entry
Grid Voltage. Positive-bias value	0 volts	Published value from supplied target entry
Plate Dissipation	1 watt	Published value from supplied target entry
Grid Voltage –	2 volts	Published value from supplied target entry
Amplification Factor	70	Published value from supplied target entry
Plate Resistance (Approx. t	44000 ohms	Published value from supplied target entry
Transconductance	11500 mhos	Published value from supplied target entry
Plate Current	2 mA	Published value from supplied target entry

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate	2.4 pF	Published value from supplied target entry
Grid to Cathode and Heater	4.2 PF	Published value from supplied target entry
Plate to Cathode and Heater	0.6 pF	Published value from supplied target entry
Direct Interelectrode Capacitances (Approx.) : ° Unit No.1 Unit No	2	Published value from supplied target entry
Grid to Plate	2.8 pF	Published value from supplied target entry
Grid to Cathode and Heater	3.4 pF	Published value from supplied target entry
Plate to Cathode and Heater	3.2 pF	Published value from supplied target entry

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes, and their source documents.

