

ELECTRONIC TUBE REFERENCE

6GU7

Voltage - Dual Triode (similar) electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

TRIODE-TRIODE

Medium-mu twin triode for television matrixing, phase-inverter, multivibrator, and general amplifier applications, with two similar sections and relatively substantial plate-dissipation capability.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9LP	BASE PINS	9
NOMINAL HEATER	6.3 V / 600 mA	PARALLEL HEATER	6.3 V / 600 mA
HEATING	Indirect	SERIES OPERATION	Capable
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

9LP - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	5500 Ω
TRANSCONDUCTANCE	0.0031 S
AMPLIFICATION FACTOR	17
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	3 W
<i>Representative identical-section row.</i>	

SECTION2 Triode	
PLATE RESISTANCE	5500 Ω
TRANSCONDUCTANCE	0.0031 S
AMPLIFICATION FACTOR	17
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	3 W
<i>Second identical physical triode section; added to align rows with SectionCount.</i>	

Medium-mu twin triode for television matrixing, phase-inverter, multivibrator, and general amplifier applications. Explicit heater variant/co-designation of 8GU7 in the approved source.

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	330 V	Typical operating conditions
Plate current	1.5 mA	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 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	5500 ohm	—
Transconductance	3100 μ S	—
Amplification factor	17	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	330 V	—
Maximum plate dissipation	3 W	—
Heater voltage	6.3 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater current	600 mA	—
Typical plate voltage	250 V	—
Typical grid voltage	-10.5 V	—
Typical plate current	11.5 mA	—
Grid cutoff bias	-23 V	—



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

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	2 pF	—
Input capacitance	2.2 pF	—
Output capacitance	1.2 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA1
Plate current	11.5 mA	ClassA1
Grid voltage	-8.5 V	ClassA1



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Plate Voltage	250 V	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Section1GridToPlateCapacitance	3.6 pF	Section1
Section2GridToPlateCapacitance	3.8 pF	Section2



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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA
Plate current	11.5 mA	ClassA
Maximum plate voltage	330 V	—
respect to cathode	200 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
respect to cathode	200 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
PLATE VOLTAGE	330 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Positive-bias value	0 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
PLATE DISSIPATION	3 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For fixed-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	5500 ohm	ClassA
Transconductance	3100 uS	ClassA
Amplification factor	17	ClassA
Voltage (AC or DC) – published value 1	6.38 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Voltage (AC or DC) – published value 2	6.3 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Voltage (AC or DC) – published value 3	0.6 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Current – published value 1	0.6 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Current – published value 2	0.04 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Current – published value 3	0.6 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Warm-up time (Average)	11	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid to plate – published value 1	3 pF	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid to plate – published value 2	3 pF	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid to cathode and heater – published value 1	3.4 pF	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid to cathode and heater – published value 2	3.6 pF	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate to cathode and heater – published value 1	0.44 pF	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Plate to cathode and heater – published value 2	0.34 pF	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Plate Voltage	250 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid Voltage	-10.5 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Plate Resistance (Approx)	5500 ohm	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Transconductance	3100	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Plate Current	11.5 mA	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Plate Current for grid volts = -14 – published value 1	-14 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Plate Current for grid volts = -14 – published value 2	4 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid Voltage (Approx.) for plate $\mu_a = 50$ – published value 1	50 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid Voltage (Approx.) for plate $\mu_a = 50$ – published value 2	-23 V	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Pin 1 –Plate of – published value 1	1	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Pin 1 –Plate of – published value 2	6	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Pin 2 –Grid of – published value 1	2	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pin 2 –Grid of – published value 2	7	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Pin 3 –Cathode of – published value 1	3	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Pin 3 –Cathode of – published value 2	8	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Pin 4 –Heater – published value 1	4	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Pin 4 –Heater – published value 2	9	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Pin 5 –Heater	5	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.



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
Heater Warm-up Time (Average)	11 s	Other;PublishedValue1
Heater Warm-up Time (Average)	11 s	Other;PublishedValue2
Peak value	200 V	Other;PublishedValue1
Peak value	200 V	Other;PublishedValue2
Average value	100 V	Other;PublishedValue1
Average value	100 V	Other;PublishedValue2
Plate Voltage	330 V	MaximumRating

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid Voltage, Positive-bias value	0 V	MaximumRating
Plate Dissipation	3 W	MaximumRating
Maximum Plate Voltage	330 V	Section1
Maximum Plate Dissipation	3 W	Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate	3 pF	Capacitance;PublishedValue1
Grid to Plate	3 pF	Capacitance;PublishedValue2
Grid to Cathode and Heater	3.4 pF	Capacitance;PublishedValue1
Grid to Cathode and Heater	3.6 pF	Capacitance;PublishedValue2
Plate to Cathode and Heater	0.44 pF	Capacitance;PublishedValue1
Plate to Cathode and Heater	0.34 pF	Capacitance;PublishedValue2
Plate of Unit No.1 to Plate of Unit No	2 pF	Capacitance;PublishedValue1
Plate of Unit No.1 to Plate of Unit No	1 pF	Capacitance;PublishedValue2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	250 V	Characteristic
Grid Voltage	-10.5 V	Characteristic
Plate Resistance (Approx.)	5500 ohm	Characteristic
Transconductance	3100 uS	Characteristic
Plate Resistance	5500 ohm	Section1
Transconductance	3100 uS	Section1
Amplification Factor	17	Section1

TUBE TINKER

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