



ELECTRONIC TUBE REFERENCE

5964

Voltage - Dual Triode (similar) electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

TRIODE-TRIODE

Medium-mu twin triode especially intended for electronic-computer frequency-divider circuits and other on/off control applications requiring extended periods in the cutoff condition.

GENERAL CHARACTERISTICS

BASE DESIGNATION	1BF	BASE PINS	7
NOMINAL HEATER	6.3 V / 450 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Common cathode	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	6500 Ω
TRANSCONDUCTANCE	0.006 S
AMPLIFICATION FACTOR	39
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	1.5 W
MAXIMUM GRID DISSIPATION	0.1 W
MAXIMUM CATHODE CURRENT	15 mA
MAXIMUM HEATER-CATHODE VOLTAGE	90 V
Representative section for two electrically identical sections.	

SECTION2 Triode	
PLATE RESISTANCE	6500 Ω
TRANSCONDUCTANCE	0.006 S
AMPLIFICATION FACTOR	39
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	1.5 W
MAXIMUM GRID DISSIPATION	0.1 W
MAXIMUM CATHODE CURRENT	15 mA
<i>Second physical triode section; electrically identical twin section.</i>	

The 5964 is a miniature twin medium-mu triode especially intended for electronic-computer frequency-divider circuits and other on/off control applications requiring long periods at cutoff.

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 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage . 6.3 Volts	6.3 V	Heater Voltage . 6.3 Volts
Heater Current . . 450 Ma	450 Ma	Heater Current . . 450 Ma
Plate Voltage . 100 Volts	100 V	Plate Voltage . 100 Volts
Plate Resistance 6500 Ohms SYLVANIA ELECTRIC	6500 Ohms	Plate Resistance 6500 Ohms SYLVANIA ELECTRIC
Transconductance . 6000 umhos	6000 umhos	Transconductance . 6000 umhos
Plate Current 9.5 Ma	9.5 Ma	Plate Current 9.5 Ma
Plate Circuit Resistance 20000 20000 Ohms	20000 Ohms	Plate Circuit Resistance 20000 20000 Ohms
Grid Supply Voltage. -10 0 Volts	0 V	Grid Supply Voltage. -10 0 Volts
Grid Circuit Resistance 47000 47000 Ohms	47000 Ohms	Grid Circuit Resistance 47000 47000 Ohms
Plate Current 0 5Ma	5 Ma	Plate Current 0 5Ma

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage 250 Volts Max.	250 V	Plate Voltage 250 Volts Max.
Plate Dissipation . 1.5 Watts Max.	1.5 W	Plate Dissipation . 1.5 Watts Max.
Peak Cathode Current! 75 Ma Max.	75 Ma	Peak Cathode Current! 75 Ma Max.



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

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid To Plate	1.3 pF	—
Grid To Cathode And Heater	2.1 pF	—
Plate To Cathode And Heater	0.4 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Service	Frequency divider / on-off control	ElectronicComputerService



SOURCE OPERATING CONDITIONS

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1966 Tung Sol Electronic Tubes 4 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 4 OF 4

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance each unit	1.3 pF	WholeTube
Grid-to-cathode-and-heater capacitance each unit	2.7 pF	WholeTube
Plate-to-cathode-and-heater capacitance each unit	0.4 pF	WholeTube

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-grid capacitance maximum	0.5 pF	WholeTube

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	250 V	WholeTube
Maximum plate dissipation	1.5 W	WholeTube
Maximum grid input	0.1 W	WholeTube
Maximum DC cathode current	15 mA	WholeTube
Maximum peak cathode current	75 mA	WholeTube
Maximum heater-cathode voltage	90 V	WholeTube
Plate voltage	100 V	ClassAEachUnit
Cathode-bias resistor	50 ohm	ClassAEachUnit
Amplification factor	39	ClassAEachUnit
Plate resistance	6500 ohm	ClassAEachUnit
Transconductance	6000 uS	ClassAEachUnit
Plate current	9.5 mA	ClassAEachUnit
Frequency-divider plate supply voltage	150 V	FrequencyHalfer
Frequency-divider plate circuit resistance	20000 ohm	FrequencyHalfer



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1971 RCA HB3 Binder 3 of 7

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

1971 RCA HB3 BINDER 3 OF 7

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage – published value 1	6.3 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Voltage – published value 2	10 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Current – published value 1	0 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Current – published value 2	45 A	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grid to Plate	1.3	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grid to Cathode and Heater	2.1	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate to Cathode and Heater	0.4	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Voltage	100 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Cathode-Bias Resistor•	50 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Resistance	6500 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Transconductance	6000	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Current	9.5 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Pin 1 -Plate of – published value 1	1	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pin 1 -Plate of – published value 2	5	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Pin 2 -Plate of – published value 1	2	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Pin 2 -Plate of – published value 2	6	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Pin 3 -Heater – published value 1	3	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Pin 3 -Heater – published value 2	7	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Pin 4 -Heater	4	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
PLATE DISSIPATION	1.5 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
GRID INPUT	0.1 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate-Supply Voltage – published value 1	150 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate-Supply Voltage – published value 2	150 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate-Circuit Resistance – published value 1	20000 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate-Circuit Resistance – published value 2	20000 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grid-Supply Voltage – published value 1	-10 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grid-Supply Voltage – published value 2	0 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-Circuit Resistance – published value 1	4 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grid-Circuit Resistance – published value 2	0 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grid-Circuit Resistance – published value 3	47000 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Current – published value 1	0 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Current – published value 2	5 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Current (Each Unit). 1 – published value 1	1 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Current (Each Unit). 1 – published value 2	0.2 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Current Between Units	0.2 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Current (Each Unit). 2 – published value 1	2 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Current (Each Unit). 2 – published value 2	4.3 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Current (Each Unit). 2 – published value 3	5.7 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Current Between Units	1.4 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Note 1 – published value 1	1 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Note 1 – published value 2	6.3 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
150, plate-circuit resistance (onm s) = 20000, grid-suDplY volts – published value 1	150 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
150, plate-circuit resistance (onm s) = 20000, grid-suDplY volts – published value 2	20000 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
_ -10, and grid-circuit resistance (onm s) = a7000	-10	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
30 milliamperes, and the peak cathode Current should not exceed 150 – published value 1	30 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
30 milliamperes, and the peak cathode Current should not exceed 150 – published value 2	150 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
GRID -CIRCUIT RESISTANCE (OHMS)=47000 t" ~ ~■C~iTt■"	47000 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid of Unit No.2	0.4 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
PLATE VOLTAGE	250 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Negative bias value	100 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Positive bias value	0 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
DC CATHODE CURRENT'	15 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
PEAK CATHODE CURRENT'	75 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater negative with respect to cathode	90 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Heater positive with respect to cathode	90 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
For fixed-bias operation – published value 1	0 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
For fixed-bias operation – published value 2	5 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
For cathode-bias operation – published value 1	1 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
For cathode-bias operation – published value 2	0 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

TUBE TINKER

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