

Medium-mu twin triode for cascode VHF tuner and RF amplifier service, with characteristics tailored to high-frequency receiving applications.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9AJ	BASE PINS	9
NOMINAL HEATER	6.3 V / 450 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

9AJ - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – 2P	B	P – Plate (Anode)	CONNECTED
PIN2 – 2G1	B	G1 – Control Grid	CONNECTED
PIN3 – 2K	B	K – Cathode	CONNECTED
PIN4 – H	–	H – Heater	CONNECTED
PIN5 – H	–	H – Heater	CONNECTED
PIN6 – 1P	A	P – Plate (Anode)	CONNECTED
PIN7 – 1G1	A	G1 – Control Grid	CONNECTED
PIN8 – 1K	A	K – Cathode	CONNECTED
PIN9 – IS	A	IS – Internal Screen	CONNECTED

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	4600 Ω
TRANSCONDUCTANCE	0.0093 S
AMPLIFICATION FACTOR	43
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	2.7 W
MAXIMUM CATHODE CURRENT	20 mA
<i>Each section; representative row.</i>	

SECTION2 Triode	
PLATE RESISTANCE	5000 Ω
TRANSCONDUCTANCE	0.0072 S
AMPLIFICATION FACTOR	36
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	2 W
MAXIMUM CATHODE CURRENT	20 mA
<i>High-frequency twin triode for low-noise VHF cascode amplifiers.</i>	

Medium-mu twin triode for cascode VHF tuner and RF amplifier service. The supplied datasheet was read for heater data, maximum ratings, characteristics, typical operating information, and interelectrode capacitances where published.



SOURCE OPERATING CONDITIONS

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	150 V	ClassA;EachSection
Heater Warmup Time	11 s	Published specifically for 6BK7B



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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	450 mA	—
Plate resistance	5000 ohm	—
Transconductance	7200 uS	—
Amplification factor	36	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	250 V	—
Maximum cathode current	20 mA	—
Maximum plate dissipation	2 W	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	1.15 pF	—
Plate-to-cathode capacitance	0.15 pF	—

1965 SYLVANIA ELECTRONIC TUBES VOL3

Section 2 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	450 mA	—
Plate resistance	5000 ohm	—
Transconductance	7200 uS	—
Amplification factor	36	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	250 V	—
Maximum cathode current	20 mA	—
Maximum plate dissipation	2 W	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	1.15 pF	—
Plate-to-cathode capacitance	0.15 pF	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1966 Tung Sol Electronic Tubes 1 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 1 OF 4

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GRID TO PLATE	1.8 μf	Section 1 GRID TO PLATE 1.8 1.8 μf
GRID TO GRID (MAX.)	0.004 μf	Section 1 GRID TO GRID (MAX.) 0.004 μf
PLATE TO PLATE (MAX.)	0.075 μf	Section 1 PLATE TO PLATE (MAX.) 0.075 μf
PLATE TO CATHODE	0.22 μf	Section 1 PLATE TO CATHODE. 0.22 0.22 μf

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HEATER VOLTAGE	6.3 V	Maximum Ratings HEATER VOLTAGE 6.3 VOLTS
MAXIMUM NEGATIVE DC GRID VOLTAGE	50 V	Maximum Ratings MAXIMUM NEGATIVE DC GRID VOLTAGE 50 voLTs
MAXIMUM PLATE DISSIPATION '2.7 W		Maximum Ratings MAXIMUM PLATE DISSIPATION '2.7 WATTS
RESPECT TO THE CATHODE AND AS NIGH AS j	0 V	Maximum Ratings RESPECT TO THE CATHODE AND AS NIGH AS j00 VOLTS NA%I NUM FOR THE 6BN 7B.
HEATER VOLTAGE	6.3 V	Typical Operating Conditions HEATER VOLTAGE 6.3 voLTs
HEATER CURRENT	450 mA	Typical Operating Conditions HEATER CURRENT 0.45 AMP.
PLATE VOLTAGE	150 V	Typical Operating Conditions PLATE VOLTAGE 150 VOLTS
CATHODE BIAS RESISTOR	56 ohm	Typical Operating Conditions CATHODE BIAS RESISTOR 56 OHMS
PLATE RESISTANCE (APPROX.)	600 ohm	Typical Operating Conditions PLATE RESISTANCE (APPROX.) 4 600 OHMS
PLATE CURRENT OF	18 mA	Typical Operating Conditions PLATE CURRENT OF 18 MA.. A FREOU EN CY OF 200 MEGALY CL E S. A STAGE BANDWIDTH OF 7 MEGACYCLES. AND



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
Typical Plate Voltage	150 V	ClassA
Typical Plate Current	18 mA	—



SOURCE DATA APPENDIX

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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage	6.3 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Current – published value 1	0 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Current – published value 2	45 A	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid to plate – published value 1	1.8	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid to plate – published value 2	1.8	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
shield, and heater – published value 1	3	Published datasheet value; multiple values represent separate source-table limits or conditions.
shield, and heater – published value 2	3	Published datasheet value; multiple values represent separate source-table limits or conditions.
shield, and heater – published value 1	1	Published datasheet value; multiple values represent separate source-table limits or conditions.
shield, and heater – published value 2	0.9	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater to cathode – published value 1	2.8	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater to cathode – published value 2	3	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate to cathode – published value 1	0.22	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate to cathode – published value 2	0.22	Published datasheet value; multiple values represent separate source-table limits or conditions.
shield, and heater – published value 1	6	Published datasheet value; multiple values represent separate source-table limits or conditions.
shield, and heater – published value 2	6	Published datasheet value; multiple values represent separate source-table limits or conditions.
shield, and heater – published value 1	2.4	Published datasheet value; multiple values represent separate source-table limits or conditions.
shield, and heater – published value 2	2.4	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate-Supply Voltage	150 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Resistance (Approx)	4600 ohm	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	9300	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Current	18 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid Volts (Approx.). for plate $\mu a = 10$ – published value 1	10 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid Volts (Approx.). for plate $\mu a = 10$ – published value 2	-11 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 1 -Plate of – published value 1	1	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 1 -Plate of – published value 2	6	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 2 -Grid of – published value 1	2	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 2 -Grid of – published value 2	7	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	9	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 5 -Heater	5	Published datasheet value; multiple values represent separate source-table limits or conditions.
permissible for this voltage Lo 6e as high as 300 volts – published value 1	6 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
permissible for this voltage Lo 6e as high as 300 volts – published value 2	300 V	Published datasheet value; multiple values represent separate source-table limits or conditions.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PLATE VOLTAGE	300 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Negative-bias value	50 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
PLATE DISSIPATION	2.7 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater negative with respect to cathode	200 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater positive with respect to cathode	200 V	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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
4.7	6.3 volts	Published datasheet value
0.6	0.45 ampere	Published datasheet value
Plate Voltage	300 volts	Published datasheet value
Grid Voltage, Negative-bias value	50 volts	Published datasheet value
Plate Supply Voltage	150 volts	Published datasheet value
Cathode-Bias Resistor	56 ohms	Published datasheet value
Plate Resistance (Approx.)	4600 ohms	Published datasheet value
Transconductance	0 A/V	Promoted from published datasheet table
Amplification Factor	43	Promoted from published datasheet table

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
2.8	3 pF	Published datasheet value

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Dissipation	2.7 watts	Published datasheet value
Maximum Plate Voltage	300 V	Promoted from published datasheet table
Maximum Plate Dissipation	2.7 W	Promoted from published datasheet table