

ELECTRONIC TUBE REFERENCE

6BC8

Voltage - Dual Triode (similar high frequency) electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

TRIODE-TRIODE

Medium-mu twin triode designed as a cascode VHF amplifier in series-string television receivers, also suitable for push-pull cathode-drive RF amplification.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9AJ	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

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	5300 Ω
TRANSCONDUCTANCE	0.0062 S
AMPLIFICATION FACTOR	33
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	2.2 W
MAXIMUM CATHODE CURRENT	22 mA
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
WARM-UP TIME	11 s
<i>Published promoted fields populated semantically; identical repeated sections compressed where applicable.</i>	

SECTION2 Triode	
PLATE RESISTANCE	5300 Ω
TRANSCONDUCTANCE	0.0062 S
AMPLIFICATION FACTOR	33
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	2.2 W
MAXIMUM CATHODE CURRENT	22 mA
<i>Physical triode restored under current one-row-per-physical-section policy.</i>	

Medium-mu twin triode used as a cascode amplifier in VHF television tuners and in push-pull cathode-drive RF amplifiers.

SOURCE OPERATING CONDITIONS

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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 4.2 Volts	4.2 V	Heater Voltage..... 6.3 4.2 Volts
Heater Current..... 400 600 Ma	600 mA	Heater Current..... 400 600 Ma
Plate Voltage. 150 Volts	150 V	Plate Voltage. 150 Volts
Grid Voltage.ooviiniiiiiiinnas 0 Volts	0 V	Grid Voltage.ooviiniiiiiiinnas 0 Volts
Plate Current. i 10 Ma	10 mA	Plate Current. i 10 Ma
Transconductance. i, 6200 umhos	6200 umhos	Transconductance. i, 6200 umhos
Grid Voltage for gm = 50 umhos (approx.).. 13 Volts	13 V	Grid Voltage for gm = 50 umhos (approx.).. 13 Volts

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage'. 250 Volts Max	250 V	Plate Voltage'. 250 Volts Max
Plate Dissipation. . 2 Watts Max	2 W	Plate Dissipation. . 2 Watts Max
Cathode Current. , 20 Ma Max	20 mA	Cathode Current. , 20 Ma Max

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid Circuit Resistance.....	0.5 Megohm	Grid Circuit Resistance..... 0.5 Megohm Max
0.5 Megohm Max		


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1961 Tung Sol

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1961 TUNG SOL

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	5300 ohm	EachUnit
Transconductance	6200 uS	EachUnit


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1966 Tung Sol Electronic Tubes 1 of 4

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1966 TUNG SOL ELECTRONIC TUBES 1 OF 4

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	100 V	Cascode;EachSection
Plate current	8.5 mA	Cascode;EachSection
Application	VHF cascode amplifier in series-string television receivers	Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	6500 μS	EachSection
Plate resistance	7000 Ω	EachSection
Amplification factor	45	EachSection



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1971 RCA HB3 Binder 4 of 7

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1971 RCA HB3 BINDER 4 OF 7

Section 1 · Triode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to plate	1.2 pF	PublishedColumn1
Input: G to (K, IS, H)	2.6 pF	—
Input:° K to (G, IS, H)	5.5 pF	—
Output: P to (K, IS H)	1.3 pF	—
Output:° P to (G, fS, H)	2.4 pF	—
Plate to cathode	0.12 pF	—
Heater to cathode	2.8 pF	PublishedColumn1
Plate of unit No.1 to plate of unit No	2 pF	PublishedColumn1
Plate of unit No.1 to plate of unit No	0.02 pF	PublishedColumn2
unit No	1 pF	PublishedColumn1
unit No	0.04 pF	PublishedColumn2

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	10 mA	—
Ef =	6.3 V	—
C E{'=	6.3 V	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode Current	22 mA	—
a This racing may be as high as	300 V	—



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 Voltage (ac/dc) 4.2	6.3 V	Published in approved 6BZ8 target datasheet entry; Section1
Heater Current 0.6	400 mA	Published in approved 6BZ8 target datasheet entry; Section1
Cathode Current	22 mA	Published in approved 6BZ8 target datasheet entry; Section1
Plate Dissipation	2.2 W	Published in approved 6BZ8 target datasheet entry; Section1
Cathode-Bias Resistor	220 Ω	Published in approved 6BZ8 target datasheet entry; Section1
Plate Resistance (Approx.)	5300 Ω	Published in approved 6BZ8 target datasheet entry; Section1
Plate Current	10 mA	Published in approved 6BZ8 target datasheet entry; Section1
Grid Voltage (Approx.) for transconductance of	50 μ S	Published in approved 6BZ8 target datasheet entry; Section1
Grid Voltage (Approx.) for transconductance of 50 /imhos	-13 V	Published in approved 6BZ8 target datasheet entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate 1.2	1.2 pF	Published in approved 6BZ8 target datasheet entry; Section1
Plate to Grid, Heater, and Internal Shield	2.4 pF	Published in approved 6BZ8 target datasheet entry; Section1
Plate to Cathode	0.12 pF	Published in approved 6BZ8 target datasheet entry; Section1
Heater to Cathode 2.8	2.8 pF	Published in approved 6BZ8 target datasheet entry; Section1

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