



ELECTRONIC TUBE REFERENCE

6CG7

Voltage - Dual Triode (similar) electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

TRIODE-TRIODE

Medium-mu twin triode used as combined vertical- and horizontal-deflection oscillator in television receivers, with pulse ratings supporting demanding sweep-generator operation.

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	6700 Ω
TRANSCONDUCTANCE	0.003 S
AMPLIFICATION FACTOR	20
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	4 W
MAXIMUM CATHODE CURRENT	20 mA
<i>Each identical triode; total both-plate dissipation 5 W</i>	

SECTION2 Triode	
PLATE RESISTANCE	6700 Ω
TRANSCONDUCTANCE	0.003 S
AMPLIFICATION FACTOR	20
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	4 W
MAXIMUM CATHODE CURRENT	20 mA
<i>Second physical triode section; electrically identical twin section.</i>	

Medium-mu twin triode used as combined vertical- and horizontal-deflection oscillator in television receivers.



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	90250 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	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	330 V	—
Maximum Plate Dissipation	—	—



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	4 pF	Section1
Input capacitance	2.3 pF	Section1
Output capacitance	2.2 pF	Section1
Grid-to-plate capacitance	4 pF	Section2
Input capacitance	2.3 pF	Section2
Output capacitance	2.2 pF	Section2

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Negative pulse grid voltage	440 V	VerticalDeflection
Negative pulse grid voltage	660 V	HorizontalDeflection
Peak cathode current	77 mA	VerticalDeflection
Peak cathode current	330 mA	HorizontalDeflection
Plate voltage	250 V	ClassA
Grid voltage	-8 V	ClassA
Plate current	5 mA	ClassA
Heater warm-up time	11 s	—



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
Total Plate Dissipation Both Plates	5 W	AllSections
Peak Cathode Current	300 mA	Pulse



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 Voltage (ac/dc) 6.3 8.4	12.6 V	Published in approved 12FQ7 target entry; Section1
Heater Current 0.6 0.45	300 mA	Published in approved 12FQ7 target entry; Section1
Heater Warm-up Time (Average)	11 seconds	Published in approved 12FQ7 target entry; Section1
Grid to Plate 3.6	3.8 pF	Published in approved 12FQ7 target entry; Section1
Grid to Cathode and Heater 2.4	2.4 pF	Published in approved 12FQ7 target entry; Section1
Plate to Cathode and Heater 0.34	0.26 pF	Published in approved 12FQ7 target entry; Section1
Plate Voltage	330 V	Published in approved 12FQ7 target entry; Section1
Grid Voltage, Positive-bias value	0 V	Published in approved 12FQ7 target entry; Section1
Cathode Current	22 mA	Published in approved 12FQ7 target entry; Section1
For both plates with both units opex'ating	5.7 W	Published in approved 12FQ7 target entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage 90	250 V	Published in approved 12FQ7 target entry; Section1
Grid Voltage 0	-8 V	Published in approved 12FQ7 target entry; Section1
Plate Resistance (Approx.) 6700	7700 Ω	Published in approved 12FQ7 target entry; Section1
DC Plate Voltage 330	330 V	Published in approved 12FQ7 target entry; Section1
Peak Negative-Pulse Grid Voltage 440	660 V	Published in approved 12FQ7 target entry; Section1
Peak Cathode Current 77	330 mA	Published in approved 12FQ7 target entry; Section1
Average Cathode Current 22	22 mA	Published in approved 12FQ7 target entry; Section1
For either plate 4	4 W	Published in approved 12FQ7 target entry; Section1
For both plates with both units operating . . . 5.7	6.7 W	Published in approved 12FQ7 target entry; Section1
Grid-Circuit Resistance 2.2	2.2 MΩ	Published in approved 12FQ7 target entry; Section1
Heater Voltage (ac/dc) 2.4 2.9	6.3 V	Published in approved 12FQ7 target entry; Section1
Heater Current 0.6 0.45	200 mA	Published in approved 12FQ7 target entry; Section1
Heater Warm-up Time (Average) 11	11 seconds	Published in approved 12FQ7 target entry; Section1
Plate Voltage	300 V	Published in approved 12FQ7 target entry; Section1
Grid-No.3 (Screen-Grid) Voltage	150 V	Published in approved 12FQ7 target entry; Section1
Negative-bias value	60 V	Published in approved 12FQ7 target entry; Section1
Positive-bias value	0 V	Published in approved 12FQ7 target entry; Section1
Cathode Current	20 mA	Published in approved 12FQ7 target entry; Section1
Plate Dissipation	3.25 W	Published in approved 12FQ7 target entry; Section1
Grid-No.3 Input	0.16 W	Published in approved 12FQ7 target entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	275 V	Published in approved 12FQ7 target entry; Section1
Grid-No.3 Voltage	135 V	Published in approved 12FQ7 target entry; Section1
Grid-No.1 Voltage	-0.2 V	Published in approved 12FQ7 target entry; Section1
Grid-No.1-Circuit Resistance, for fixed-bias operation	0.5 MΩ	Published in approved 12FQ7 target entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate of Unit No.1 to Plate of Unit No	2 pF	Published in approved 12FQ7 target entry; Section1
Grid No.1 to Plate 0.03	0.016 pF	Published in approved 12FQ7 target entry; Section1
No.3, and Grid No.4	4.8 pF	Published in approved 12FQ7 target entry; Section1
and Grid No	4 pF	Published in approved 12FQ7 target entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current 10	9 mA	Published in approved 12FQ7 target entry; Section1
Grid Voltage (Approx.) for plate current of 10 /iA. -7	-18 V	Published in approved 12FQ7 target entry; Section1
12.5 volts	1.3 mA	Published in approved 12FQ7 target entry; Section1
Plate Resistance (Approx.)	0.24 MΩ	Published in approved 12FQ7 target entry; Section1
Transconductance	10000 μS	Published in approved 12FQ7 target entry; Section1
Plate Current	9 mA	Published in approved 12FQ7 target entry; Section1
Grid-No.3 Current	0.17 mA	Published in approved 12FQ7 target entry; Section1
Grid-No.1 Voltage (Approx.) for transconductance of	100 μS	Published in approved 12FQ7 target entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.1 Voltage (Approx.) for transconductance of 100 /imhos	-5 V	Published in approved 12FQ7 target entry; Section1

TUBE TINKER

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