

ELECTRONIC TUBE REFERENCE

6JV8

Voltage - Triode Pentode electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

High-mu triode and sharp-cutoff pentode for television sound-IF, sync, keyed-AGC, and video-amplifier circuits.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9AE	BASE PINS	9
NOMINAL HEATER	6.3 V / 600 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

9AE - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – 2P	B	P – Plate (Anode)	CONNECTED
PIN2 – 1G1	A	G1 – Control Grid	CONNECTED
PIN3 – 1G2	A	G2 – Screen Grid	CONNECTED
PIN4 – H	–	H – Heater	CONNECTED
PIN5 – H	–	H – Heater	CONNECTED
PIN6 – 1P	A	P – Plate (Anode)	CONNECTED
PIN7 – 1G3	A	G3 – Suppressor Grid	CONNECTED
PIN7 – IS	A	IS – Internal Screen	CONNECTED
PIN7 – 1K	A	K – Cathode	CONNECTED
PIN8 – 2K	B	K – Cathode	CONNECTED
PIN9 – 2G1	B	G1 – Control Grid	CONNECTED

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	150000 Ω
TRANSCONDUCTANCE	0.0107 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	4 W
MAXIMUM SCREEN DISSIPATION	1.7 W
MAXIMUM CATHODE CURRENT	60 mA
<i>Published ratings/characteristics promoted from supplied datasheet.</i>	

SECTION2 Triode	
PLATE RESISTANCE	17500 Ω
TRANSCONDUCTANCE	0.004 S
AMPLIFICATION FACTOR	70
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	1.1 W
<i>Published ratings/characteristics promoted from supplied datasheet.</i>	

High-mu triode and sharp-cutoff pentode for television sound-IF, sync, keyed-AGC, and video-amplifier circuits. Explicit heater variant/co-designation of 8JV8 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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	200 V	Pentode average characteristics
Screen Voltage	200 V	Pentode average characteristics

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	22 mA	Pentode average characteristics
Screen Current	4 mA	Pentode average characteristics

1961 TUNG SOL

Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	200 V	Triode average characteristics

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	4 mA	Triode average characteristics



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	200 V	PentodeSection
Grid 2 voltage	200 V	PentodeSection
Grid 1 voltage	-2.9 V	PentodeSection
Plate current	22 mA	PentodeSection
Grid 2 current	4 mA	PentodeSection
Knee plate voltage	60 V	PentodeSection;Grid1=0
Knee plate current	51 mA	PentodeSection;Grid1=0

1966 TUNG SOL ELECTRONIC TUBES 2 OF 4

Section 2 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	200 V	TriodeSection
Grid 1 voltage	-2 V	TriodeSection
Plate current	4 mA	TriodeSection
Heater warm-up time	11 s	WholeTube



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

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 · Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input Capacitance	8 pF	—



SOURCE DATA APPENDIX

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
Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC)	6.3 V	Published table value column 1
Voltage (AC or DC)	6.3 V	Published table value column 2
Voltage (AC or DC)	10.6 V	Published table value column 3
Current	0 mA	Published table value column 1
Current	600 A	Published table value column 2
Current	10.04 A	Published table value column 3
Current	600 mA	Published table value column 4
Warm-up time (Average)	11 s	Published table value
respect to cathode	200 V	Published table value
Grid to plate	2.2 pF	Published table value
Grid No	1 pF	Published table value column 1
Grid No	0.08 pF	Published table value column 2
grid No	2 pF	Published table value column 1
grid No	3.2 pF	Published table value column 2
triode plate	0.012 pF	Published table value
triode plate	0.24 pF	Published table value
Plate Voltage	200 V	Published table value
Grid-No.1 .Voltage	-2 V	Published table value
Plate Current	4 mA	Published table value
for plate μ a =	20 V	Published table value column 1
for plate μ a =	5 V	Published table value column 2
Plate Voltage	40 V	Published table value column 1
Plate Voltage	60 V	Published table value column 2
Plate Voltage	125 V	Published table value column 3
Plate Voltage	200 V	Published table value column 4

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No,	2 V	Published table value column 1
Grid-No,	125 V	Published table value column 2
Grid-No,	200 V	Published table value column 3
Grid-No,	125 V	Published table value column 4
Grid-No	1 V	Published table value column 1
Grid-No	0 V	Published table value column 2
Grid-No	0 V	Published table value column 3
Grid-No	1 V	Published table value column 4
Plate Current	28 mA	Published table value column 1
Plate Current	51 mA	Published table value column 2
Plate Current	22 mA	Published table value column 3
Plate Current	22 mA	Published table value column 4
Grid-No	2 mA	Published table value column 1
Grid-No	9 mA	Published table value column 2
Grid-No	14 mA	Published table value column 3
Grid-No	4 mA	Published table value column 4

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance (Approx.)	17500 Ω	Published table value
Transconductance	4000 μS	Published table value
Plate Resistance (Approx.) –	100000 Ω	Published table value column 1
Plate Resistance (Approx.) –	150000 Ω	Published table value column 2
Transconductance – –	11500 μS	Published table value column 1
Transconductance – –	10700 μS	Published table value column 2



SOURCE DATA APPENDIX

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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	330 V	Section2
Maximum Plate Dissipation	4 W	Section2
Maximum Cathode Current	60 mA	Section2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	100000 ohm	Section2
Transconductance	11500 uS	Section2

1975 RCA RC30

Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
°T	2 MA	Other
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;PublishedValue1
Plate Voltage	330 V	MaximumRating;PublishedValue2
Grid-No	2 V	MaximumRating;PublishedValue1
Grid-No	330 V	MaximumRating;PublishedValue2
Positive-bias value	0 V	MaximumRating;PublishedValue1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Positive-bias value	0 V	MaximumRating;PublishedValue2
Negative-bias value	50 V	MaximumRating;PublishedValue1
Negative-bias value	50 V	MaximumRating;PublishedValue2
Plate Dissipation	1.1 W	MaximumRating;PublishedValue1
Plate Dissipation	4 W	MaximumRating;PublishedValue2
Grid-No	2 W	MaximumRating;PublishedValue1
Grid-No	1.7 W	MaximumRating;PublishedValue2
Plate Voltage	200 V	MaximumRating;PublishedValue1
Plate Voltage	60 V	MaximumRating;PublishedValue2
Plate Voltage	125 V	MaximumRating;PublishedValue3
Plate Voltage	200 V	MaximumRating;PublishedValue4
Grid-No	2 V	MaximumRating;PublishedValue1
Grid-No	200 V	MaximumRating;PublishedValue2
Grid-No	125 V	MaximumRating;PublishedValue3
Grid-No	200 V	MaximumRating;PublishedValue4
Grid-No.1 Voltage	-2 V	MaximumRating;PublishedValue1
Grid-No.1 Voltage	0 V	MaximumRating;PublishedValue2
Grid-No.1 Voltage	-2.9 V	MaximumRating;PublishedValue3
Plate Resistance (Approx.)	0.0175 megohm	MaximumRating;PublishedValue1
Plate Resistance (Approx.)	0.1 megohm	MaximumRating;PublishedValue2
Plate Resistance (Approx.)	0.15 megohm	MaximumRating;PublishedValue3
Plate Current	4 mA	MaximumRating;PublishedValue1
Plate Current	51 mA	MaximumRating;PublishedValue2
Plate Current	22 mA	MaximumRating;PublishedValue3
Plate Current	22 mA	MaximumRating;PublishedValue4
Grid-No	2 mA	MaximumRating;PublishedValue1
Grid-No	14 mA	MaximumRating;PublishedValue2

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate	2.2 pF	Capacitance
Grid to Cathode and Heater	3 pF	Capacitance
Plate to Cathode and Heater	2 pF	Capacitance

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to Plate	0.08 pF	Capacitance
Internal Shield	8 pF	Capacitance
Internal Shield	3.2 pF	Capacitance
Pentode Grid No.1 to Triode Plate	0.012 pF	Capacitance
Pentode Plate to Triode Plate	0.24 pF	Capacitance

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