

ELECTRONIC TUBE REFERENCE

6GN8

Voltage - Triode Pentode electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

High-mu triode and sharp-cutoff pentode for television sync, sound-IF, phase-inverter, and video-amplifier service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9DX	BASE PINS	9
NOMINAL HEATER	6.3 V / 750 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

9DX - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	60000 Ω
TRANSCONDUCTANCE	0.0115 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	5 W
MAXIMUM SCREEN DISSIPATION	1.1 W
MAXIMUM CATHODE CURRENT	50 mA
<i>Video-amplifier pentode section.</i>	

SECTION2 Triode	
PLATE RESISTANCE	37000 Ω
TRANSCONDUCTANCE	0.0027 S
AMPLIFICATION FACTOR	100
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	1 W
MAXIMUM CATHODE CURRENT	20 mA
<i>High-mu triode section.</i>	

High-mu triode and sharp-cutoff pentode for television sync, sound-IF, phase-inverter, and video-amplifier service. Explicit heater variant/co-designation of 8EB8 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
Heater voltage	6.3 V	—
Heater current	780 mA	—
Plate voltage	330330 V	Typical operating conditions
Screen voltage	150 V	Typical operating conditions
Plate current	225 mA	Typical operating conditions

1961 TUNG SOL

Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	780 mA	—
Plate voltage	330330 V	Typical operating conditions
Screen voltage	150 V	Typical operating conditions
Plate current	225 mA	Typical operating conditions

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 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	60000 ohm	—
Transconductance	11500 uS	—
OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	330 V	—
Maximum plate dissipation	5 W	—
Maximum screen-grid dissipation	1.1 W	—
Heater voltage	6.3 V	—
Heater current	750 mA	—
Typical plate voltage	200 V	—
Typical screen-grid voltage	150 V	—
Typical plate current	25 mA	—
Typical screen-grid current	5.5 mA	—

1965 SYLVANIA ELECTRONIC TUBES VOL3

Section 2 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	37000 ohm	—
Transconductance	2700 uS	—
Amplification factor	100	—
OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	330 V	—
Maximum plate dissipation	1 W	—
Heater voltage	6.3 V	—
Heater current	750 mA	—
Typical plate voltage	250 V	—
Typical plate current	2 mA	—

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

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid 1 to plate capacitance	0.1 pF	—
Input capacitance	11 pF	—
Output capacitance	4.2 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	200 V	ClassA1
Plate current	25 mA	ClassA1
Screen voltage	150 V	ClassA1
Screen current	5.5 mA	ClassA1

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Instantaneous plate current	55 mA	Plate60V;Screen150V;Grid1=0V

1966 TUNG SOL ELECTRONIC TUBES 2 OF 4

Section 2 · Triode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	4.4 pF	—
Input capacitance	2.4 pF	—
Output capacitance	0.36 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current	2 mA	ClassA1



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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Plate Voltage	200 V	PentodeSection
Typical Screen Voltage	150 V	PentodeSection

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Plate Current	25 mA	PentodeSection

1968 GENERAL ELECTRIC CO

Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Plate Voltage	250 V	TriodeSection

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Plate Current	2 mA	TriodeSection



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 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	200 V	Pentode
Plate current	25 mA	Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	11500 uS	Pentode
Plate resistance	60000 ohm	Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.1 pF	Pentode

1971 RCA HB3 BINDER 5 OF 7

Section 2 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	750 mA	—
Plate voltage	250 V	Triode
Plate current	2 mA	Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	2700 uS	Triode
Amplification factor	100	Triode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	4.4 pF	Triode

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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	330 V	Section2
Maximum Screen Voltage	330 V	Section2
Maximum Plate Dissipation	5 W	Section2
Maximum Screen Dissipation	1.1 W	Section2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	60000 ohm	Section2
Transconductance	11500 uS	Section2

1975 RCA RC30

Section 2 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Warm-up Time (Average) –	11 s	Characteristic;PublishedValue1
Heater Warm-up Time (Average) –	11 s	Characteristic;PublishedValue2
Peak value	200 V	Characteristic;PublishedValue1
Peak value	200 V	Characteristic;PublishedValue2
Peak value	200 V	Characteristic;PublishedValue3
Average value	100 V	Characteristic;PublishedValue1
Average value	100 V	Characteristic;PublishedValue2
Average value	100 V	Characteristic;PublishedValue3
Plate Supply Voltage	250 V	Characteristic;PublishedValue1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Supply Voltage	60 V	Characteristic;PublishedValue2
Plate Supply Voltage	200 V	Characteristic;PublishedValue3
Grid-No.1 Voltage –	2 V	Characteristic;PublishedValue1
Grid-No.1 Voltage –	0 V	Characteristic;PublishedValue2
Plate Resistance (Approx.)	37000 ohm	Characteristic;PublishedValue1
Plate Resistance (Approx.)	60000 ohm	Characteristic;PublishedValue2
Grid-No	2 mA	Characteristic;PublishedValue1
Grid-No	18 mA	Characteristic;PublishedValue2
Grid-No	5.5 mA	Characteristic;PublishedValue3
Grid Voltage (Approx.) for plate current of	20 V	Characteristic;PublishedValue1
Grid Voltage (Approx.) for plate current of	-5 V	Characteristic;PublishedValue2
Grid-No.1 Voltage (Approx.) for plate current	100 uA	Characteristic;PublishedValue1
Grid-No.1 Voltage (Approx.) for plate current	-10 uA	Characteristic;PublishedValue2
Plate Resistance	37000 ohm	Section1
Transconductance	2700 uS	Section1
Amplification Factor	100	Section1

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	330 V	MaximumRating;PublishedValue1
Plate Voltage	330 V	MaximumRating;PublishedValue2
Grid-No	2 V	MaximumRating;PublishedValue1
Grid-No	330 V	MaximumRating;PublishedValue2
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0 V	MaximumRating;PublishedValue1
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0 V	MaximumRating;PublishedValue2
Plate Dissipation	1 W	MaximumRating;PublishedValue1
Plate Dissipation	5 W	MaximumRating;PublishedValue2
For grid-No	2 V	MaximumRating;PublishedValue1
For grid-No	165 V	MaximumRating;PublishedValue2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Published value	1.1 W	MaximumRating
For grid-No	2 V	MaximumRating;PublishedValue1
For grid-No	165 V	MaximumRating;PublishedValue2
For grid-No	330 V	MaximumRating;PublishedValue3
For grid-No	300 V	MaximumRating;PublishedValue4
For fixed-bias operation	0.5 megohm	MaximumCircuitValue;PublishedValue1
For fixed-bias operation	0.25 megohm	MaximumCircuitValue;PublishedValue2
For cathode-bias operation	1 megohm	MaximumCircuitValue;PublishedValue1
For cathode-bias operation	1 megohm	MaximumCircuitValue;PublishedValue2
Maximum Plate Voltage	330 V	Section1
Maximum Plate Dissipation	1 W	Section1

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes,
and their source documents.

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