

ELECTRONIC TUBE REFERENCE

6KD8

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Medium-mu triode and sharp-cutoff pentode for combined television oscillator and mixer service around a 40-MHz intermediate frequency.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9AE	BASE PINS	9
NOMINAL HEATER	6.3 V / 400 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 Triode	
TRANSCONDUCTANCE	0.0075 S
AMPLIFICATION FACTOR	40
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	2.5 W
<i>Published maximum ratings and characteristics promoted semantically from the approved source.</i>	

SECTION2 Pentode	
PLATE RESISTANCE	200000 Ω
TRANSCONDUCTANCE	0.005 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	3 W
MAXIMUM SCREEN DISSIPATION	0.55 W
<i>Published maximum ratings and characteristics promoted semantically from the approved source.</i>	

Medium-mu triode and sharp-cutoff pentode for combined television oscillator and mixer service around 40 MHz. Explicit heater variant/co-designation of 9U8A in the approved source.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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
Transconductance	7500 μS	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	330 V	—
Maximum Plate Dissipation	2.5 W	—
Plate Voltage	125 V	Triode oscillator
Plate Current	13.5 mA	Triode section

1950 SYLVANIA

Section 2 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	200000 ohm	—
Transconductance	5000 μS	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	330 V	—
Maximum Screen Voltage	330 V	—
Maximum Plate Dissipation	3 W	—
Maximum Screen Dissipation	0.55 W	—
Plate Current	9.5 mA	Pentode mixer

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
Plate Voltage	125 V	Triode typical operation

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	3.5 mA	Triode typical operation

1961 TUNG SOL

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	125 V	Pentode typical operation
Screen Voltage	110 V	Pentode typical operation

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	9.5 mA	Pentode typical operation
Screen Current	3.5 mA	Pentode typical operation

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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	125 V	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification factor	40	ClassA

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	3 pF	Section1
Output capacitance	3 pF	Section1

1966 TUNG SOL ELECTRONIC TUBES 2 OF 4

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	125 V	ClassA
Screen voltage	100 V	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	6400 μ S	ClassA
Plate resistance	200000 ohm	ClassA

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	3 pF	Section2
Output capacitance	3 pF	Section2



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
^fc T	40 MHz	Other;PublishedValue1
^fc T	4.7 MHz	Other;PublishedValue2
^fc T	6 MHz	Other;PublishedValue3
^fc T	9 MHz	Other;PublishedValue4
Heater Warm-up Time (Average)	11 s	Other;PublishedValue1
Heater Warm-up Time (Average)	11 s	Other;PublishedValue2
Heater Warm-up Time (Average)	11 s	Other;PublishedValue3
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
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	2.5 W	MaximumRating;PublishedValue1
Plate Dissipation	3 W	MaximumRating;PublishedValue2
For grid-No	2 V	MaximumRating;PublishedValue1
For grid-No	165 V	MaximumRating;PublishedValue2
For grid-No	0.55 V	MaximumRating;PublishedValue3

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
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
Maximum Plate Voltage	330 V	Section1
Maximum Plate Dissipation	2.5 W	Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate	1.8 pF	Capacitance;PublishedValue1
Grid to Plate	1.8 pF	Capacitance;PublishedValue2
Pentode Grid No	3 pF	Capacitance;PublishedValue1
Pentode Grid No	2.8 pF	Capacitance;PublishedValue2
Pentode Grid No	2.8 pF	Capacitance;PublishedValue3
Pentode Grid No	3 pF	Capacitance;PublishedValue1
Pentode Grid No	1.5 pF	Capacitance;PublishedValue2
Pentode Grid No	2 pF	Capacitance;PublishedValue3
Grid No.1 to Plate	0.01 pF	Capacitance;PublishedValue1
Grid No.1 to Plate	0.006 pF	Capacitance;PublishedValue2
Grid No	3 pF	Capacitance;PublishedValue1
Grid No	5 pF	Capacitance;PublishedValue2
Grid No	5 pF	Capacitance;PublishedValue3
Grid No	3 pF	Capacitance;PublishedValue1
Grid No	2.6 pF	Capacitance;PublishedValue2
Grid No	3.5 pF	Capacitance;PublishedValue3
Triode Cathode to Heater	3 pF	Capacitance;PublishedValue1
Triode Cathode to Heater	3 pF	Capacitance;PublishedValue2
Internal Shield	3 pF	Capacitance;PublishedValue1
Internal Shield	3 pF	Capacitance;PublishedValue2
Pentode Grid No.1 to Triode Plate	0.2 pF	Capacitance;PublishedValue1
Pentode Grid No.1 to Triode Plate	0.2 pF	Capacitance;PublishedValue2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pentode Plate to Triode Plate	0.1 pF	Capacitance;PublishedValue1
Pentode Plate to Triode Plate	0.02 pF	Capacitance;PublishedValue2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	125 V	Characteristic;PublishedValue1
Plate Voltage	125 V	Characteristic;PublishedValue2
Grid-No2 Voltage	110 V	Characteristic
Grid-No.1 Voltage	-1 V	Characteristic
Plate Resistance (Approx.)	0.2 megohm	Characteristic
Plate Current	13.5 mA	Characteristic;PublishedValue1
Plate Current	9.5 mA	Characteristic;PublishedValue2
Grid-No	2 mA	Characteristic;PublishedValue1
Grid-No	3.5 mA	Characteristic;PublishedValue2
Grid-No.1 Voltage (Approx.) for plate current of	20 V	Characteristic;PublishedValue1
Grid-No.1 Voltage (Approx.) for plate current of	-9 V	Characteristic;PublishedValue2
Grid-No.1 Voltage (Approx.) for plate current of	-8 V	Characteristic;PublishedValue3
Transconductance	7500 uS	Section1
Amplification Factor	40	Section1

1975 RCA RC30

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	330 V	Section2
Maximum Screen Voltage	330 V	Section2
Maximum Plate Dissipation	3 W	Section2
Maximum Screen Dissipation	0.55 W	Section2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	200000 ohm	Section2
Transconductance	5000 uS	Section2

TUBE TINKER

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

[Catalog](#)
[Tube types](#)
[Full books](#)
[Blog](#)
[Feedback & corrections](#)

© 2026 Tube Tinker