

ELECTRONIC TUBE REFERENCE

6X8A

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Combined triode-pentode for oscillator, mixer, frequency-converter, RF, or IF service in television, communications, or mobile receivers.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9AK	BASE PINS	9
NOMINAL HEATER	6.3 V / 450 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Common cathode	SECTION CONSTRUCTION	Dissimilar

9AK - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – 1G3	A	G3 – Suppressor Grid	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 – K	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 Triode	
PLATE RESISTANCE	6000 Ω
TRANSCONDUCTANCE	0.0065 S
AMPLIFICATION FACTOR	40
MAXIMUM PLATE VOLTAGE	275 V
MAXIMUM PLATE DISSIPATION	1.7 W

SECTION2 Pentode	
PLATE RESISTANCE	300000 Ω
TRANSCONDUCTANCE	0.0055 S
MAXIMUM PLATE VOLTAGE	275 V
MAXIMUM SCREEN VOLTAGE	275 V
MAXIMUM PLATE DISSIPATION	2.3 W
MAXIMUM SCREEN DISSIPATION	0.45 W

6X8A is a TriodePentode vacuum tube documented in the RCA Receiving Tube Manual. The supplied excerpt was reviewed for heater data, section arrangement, maximum ratings, electrical characteristics, interelectrode capacitances, typical operating conditions, and stated applications.

SOURCE OPERATING CONDITIONS

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	Nominal
Heater current	450 mA	Nominal
Plate voltage	125 V	ClassA
Grid 1 voltage	-1 V	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current	12 mA	ClassA
Transconductance	6500 μ S	ClassA
Plate resistance	6000 ohm	ClassA
Amplification factor	40	ClassA
Heater warm-up time	11 s	ControlledWarmup

1961 TUNG SOL

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Nominal
Heater current	450 mA	Nominal
Plate voltage	125 V	ClassA
Screen voltage	125 V	ClassA
Grid 1 voltage	-1 V	ClassA

Characteristic		
Parameter	Published Value	Condition / Note
Plate current	9 mA	ClassA
Screen current	2.2 mA	ClassA
Transconductance	5500 μ S	ClassA
Plate resistance	300000 ohm	ClassA
Zero-bias transconductance	5700 μ S	ClassA



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
Grid #1 voltage	-1 V	ClassA
Plate current	12 mA	ClassA
Heater warm-up time	11 s	BothSections

Characteristic		
Parameter	Published Value	Condition / Note
Transconductance	6500 μ S	—
Plate resistance	6000 ohm	—
Amplification factor	40	—

Capacitance		
Parameter	Published Value	Condition / Note
Grid-to-plate capacitance	1.7 pF	—
Input capacitance	3 pF	—
Output capacitance	1.4 pF	—

1966 TUNG SOL ELECTRONIC TUBES 2 OF 4

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	125 V	ClassA
Grid #2 voltage	125 V	ClassA
Grid #1 voltage	-1 V	ClassA
Plate current	9 mA	ClassA
Grid #2 current	2.2 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	5500 μ S	—
Plate resistance	300000 ohm	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.02 pF	—
Input capacitance	5 pF	—
Output capacitance	2.6 pF	—

TUBE TINKER

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and their source documents.

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