

ELECTRONIC TUBE REFERENCE

5B8

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA
2 SECTIONS
CONSTRUCTION
PENTODE-TRIODE

Medium-mu triode and sharp-cutoff pentode for VHF oscillator and mixer service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9EC	BASE PINS	9
NOMINAL HEATER	4.7 V / 600 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

9EC - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – Pin 1	A	G3 – Suppressor Grid	CONNECTED
PIN1 – Pin 1	B	K – Cathode	CONNECTED
PIN1 – Pin 1	–	IS – Internal Screen	CONNECTED
PIN2 – Pin 2	B	G1 – Control Grid	CONNECTED
PIN3 – Pin 3	B	P – Plate (Anode)	CONNECTED
PIN4 – Pin 4	–	H – Heater	CONNECTED
PIN5 – Pin 5	–	H – Heater	CONNECTED
PIN6 – Pin 6	A	G1 – Control Grid	CONNECTED
PIN7 – Pin 7	A	K – Cathode	CONNECTED
PIN8	A	G2 – Screen Grid	CONNECTED
PIN9	A	P – Plate (Anode)	CONNECTED

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	5750 Ω
TRANSCONDUCTANCE	0.0033 S
AMPLIFICATION FACTOR	19
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	2.6 W
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
WARM-UP TIME	11 s
<i>Published medium-mu triode Class A1 characteristics.</i>	

SECTION2 Pentode	
PLATE RESISTANCE	300000 Ω
TRANSCONDUCTANCE	0.0062 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	2 W
MAXIMUM SCREEN DISSIPATION	0.5 W
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
WARM-UP TIME	11 s
<i>Published sharp-cutoff pentode Class A1 characteristics.</i>	

5B8 is described in the supplied Tung-Sol datasheet as a medium-mu triode and sharp-cutoff pentode for VHF oscillator/mixer service. The redo includes a substantive section-electrical extraction from ratings and characteristic tables.



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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	4.7 V	Nominal
Heater Current	600 mA	Nominal
Plate Voltage	200 V	ClassA
Plate Current	13 mA	ClassA

1950 SYLVANIA

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	200 V	ClassA
Screen Voltage	150 V	ClassA
Plate Current	9.5 mA	ClassA
Screen Current	2.8 mA	ClassA



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1966 Tung Sol Electronic Tubes 1 of 4

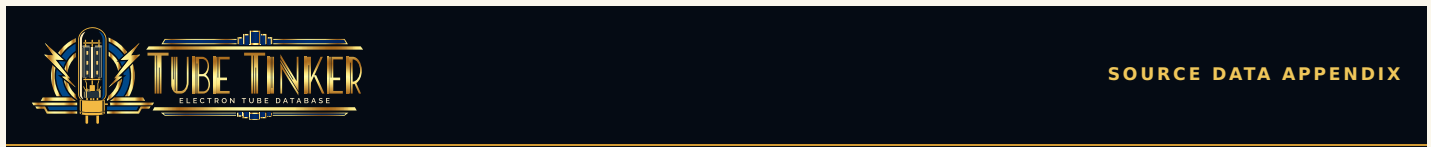
Published test conditions and operating points. Values on this page are preserved as reported by this source.

1966 TUNG SOL ELECTRONIC TUBES 1 OF 4

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	4.7 V	Published rating
Heater/filament current	600 mA	Published rating
Heater warm-up	Controlled	SeriesHeater

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	VHF oscillator and mixer	TelevisionService



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1971 RCA HB3 Binder 4 of 7

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1971 RCA HB3 BINDER 4 OF 7

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply voltage	200 V	ClassA1
Grid voltage	-6 V	ClassA1
Plate current	13 mA	ClassA1
Maximum fixed-bias grid circuit resistance	0.5 Mohm	—
Maximum cathode-bias grid circuit resistance	1 Mohm	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	5750 ohm	ClassA1
Transconductance	3300 uS	ClassA1
Amplification factor	19	ClassA1
Grid-to-plate capacitance	1.7 pF	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-cathode/heater capacitance	1.9 pF	—
Plate-to-cathode/heater capacitance	1.4 pF	—
Heater warm-up time	11 s	ControlledWarmUp

1971 RCA HB3 BINDER 4 OF 7

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply voltage	200 V	ClassA1
Grid 2 supply voltage	150 V	ClassA1
Cathode resistor	180 ohm	ClassA1
Plate current	9.5 mA	ClassA1
Grid 2 current	2.8 mA	ClassA1
Maximum fixed-bias grid circuit resistance	0.25 Mohm	—
Maximum cathode-bias grid circuit resistance	1 Mohm	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	300000 ohm	ClassA1
Transconductance	6200 uS	ClassA1
Grid 1 cutoff reference voltage	-8 V	ClassA1
Grid 1-to-plate capacitance	0.05 pF	—
Grid 1 input capacitance	6 pF	—
Plate output capacitance	2.6 pF	—
Plate-to-cathode/grid2/heater capacitance	0.15 pF	—

TUBE TINKER

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

