

ELECTRONIC TUBE REFERENCE

5BR8

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Medium-mu triode plus sharp-cutoff pentode used as a combined oscillator and mixer in VHF television tuners.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9FA	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

9FA - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	5000 Ω
TRANSCONDUCTANCE	0.0085 S
AMPLIFICATION FACTOR	40
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	2.7 W
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
WARM-UP TIME	11 s
<i>Referenced ratings not printed in this source; not inferred.</i>	

SECTION2 Pentode	
PLATE RESISTANCE	400000 Ω
TRANSCONDUCTANCE	0.0052 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	2.8 W
MAXIMUM SCREEN DISSIPATION	0.5 W
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
WARM-UP TIME	11 s
<i>Referenced ratings not printed in this source; not inferred.</i>	

Reference/equivalence entry for a medium-mu triode plus sharp-cutoff pentode used as a combined oscillator and mixer in VHF television tuners.



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
Triode transconductance	8500 μ S	TriodeSection
Triode amplification factor	40	TriodeSection
Pentode transconductance	5200 μ S	PentodeSection

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pentode grid-to-plate capacitance	0.008 pF	WithShield
Pentode input capacitance	5 pF	Published

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Local oscillator and pentode mixer	VHF
Triode plate voltage	150 V	TriodeSection
Triode plate current	15 mA	TriodeSection
Pentode plate voltage	250 V	PentodeSection
Pentode screen voltage	110 V	PentodeSection
Pentode plate current	10 mA	PentodeSection
Pentode screen current	3.5 mA	PentodeSection



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 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Warmup Time	11 s	—



SOURCE DATA APPENDIX

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 voltage	150 V	Triode;ClassA
Cathode bias resistor	56 ohm	Triode;ClassA
Plate current	18 mA	Triode;ClassA
Heater/filament voltage	4.7 V	DerivativeSheet
Heater/filament current	600 mA	DerivativeSheet
Heater warm-up time	11 s	ControlledWarmup

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	5000 ohm	Triode
Transconductance	8500 uS	Triode
Amplification factor	40	Triode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	1.8 pF	Triode

1971 RCA HB3 BINDER 4 OF 7

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	Pentode;ClassA
Screen voltage	110 V	Pentode;ClassA
Cathode bias resistor	68 ohm	Pentode;ClassA
Plate current	10 mA	Pentode;ClassA
Screen current	3.5 mA	Pentode;ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	400000 ohm	Pentode
Transconductance	5200 uS	Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.008 pF	Pentode;Shielded
Input capacitance	5 pF	Pentode
Output capacitance	3.5 pF	Pentode

TUBE TINKER

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and their source documents.

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