

ELECTRONIC TUBE REFERENCE

5BW8

Voltage Pentode or Tetrode (with diode) electronic tube

CONSOLIDATED TECHNICAL DATA
3 SECTIONS
CONSTRUCTION
DIODE-DIODE-PENTODE

Double-diode pentode designed for television detector and amplifier service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9HK	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

9HK - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Diode	
MAXIMUM CATHODE CURRENT	5 mA
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
WARM-UP TIME	11 s
Referenced ratings not printed in this source; not inferred.	

SECTION2 Diode	
MAXIMUM CATHODE CURRENT	10 mA
Referenced ratings not printed in this source; not inferred.	

SECTION3 Pentode	
PLATE RESISTANCE	250000 Ω
TRANSCONDUCTANCE	0.0052 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	3 W
MAXIMUM SCREEN DISSIPATION	0.55 W
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
WARM-UP TIME	11 s
Referenced ratings not printed in this source; not inferred.	

5BW8 is described in the supplied Tung-Sol datasheet as a double-diode pentode for television detector/amplifier service. The redo includes a substantive section-electrical extraction from ratings and characteristic tables.

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 3 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA
Screen voltage	110 V	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current	10 mA	ClassA
Screen current	3.5 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 · Diode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	4.7 V	Published rating
Heater/filament current	600 mA	Published rating
Pentode plate resistance	250000 ohm	PentodeSection
Pentode transconductance	5200 μ S	PentodeSection

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Diode 1 plate-to-cathode capacitance	1.3 pF	DiodeSection
Diode 2 plate-to-cathode capacitance	1.2 pF	DiodeSection

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum screen supply voltage	330 V	PentodeSection
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
Average diode current	20 mA	EachDiode At5VDC


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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 · Diode

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


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

1971 RCA HB3 Binder 4 of 7

[SOURCE PDF](#)

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 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak inverse voltage	330 V	EachDiode
Peak diode current	60 mA	EachDiode
Average diode current	10 mA	EachDiode
Heater/filament voltage	4.7 V	DerivativeSheet
Heater/filament current	600 mA	DerivativeSheet
Heater warm-up time	11 s	ControlledWarmup

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Diode plate-to-cathode capacitance	2.5 pF	EachDiode

1971 RCA HB3 BINDER 4 OF 7

Section 2 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak inverse voltage	330 V	EachDiode
Peak diode current	60 mA	EachDiode
Average diode current	10 mA	EachDiode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Diode plate-to-cathode capacitance	2.5 pF	EachDiode

1971 RCA HB3 BINDER 4 OF 7

Section 3 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	Pentode;ClassA
Screen voltage	150 V	Pentode;ClassA
Plate current	10 mA	Pentode;ClassA
Screen current	3 mA	Pentode;ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	500000 ohm	Pentode
Transconductance	6000 uS	Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.01 pF	Pentode
Input capacitance	6 pF	Pentode
Output capacitance	3.5 pF	Pentode