ELECTRONIC TUBE REFERENCE

6HR6

Voltage - Pentode Remote Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
PENTODE

> Semi-remote-cutoff pentode for gain-controlled IF amplifier service, with controlled heater warm-up for coordinated receiver operation.

General characteristics

BASE DESIGNATION	7BK	**BASE PINS**	7
NOMINAL HEATER	6.3 V / 450 mA	**PARALLEL HEATER**	— / —
HEATING	Indirect	**SERIES OPERATION**	Not specified
CATHODE ARRANGEMENT	Separate cathodes	**SECTION CONSTRUCTION**	Similar

7BK - Terminal pinout

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

Section ratings

SECTION1 Pentode

PLATE RESISTANCE	500000 Ω
TRANSCONDUCTANCE	0.0085 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V

Published maximum ratings and characteristic values promoted where applicable; additional table values retained in TUBE_SECTION_PARAMETER.

> Semi-remote-cutoff pentode designed for IF amplifier service.

SOURCE OPERATING CONDITIONS

1971 RCA HB3 Binder 5 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 5 OF 7

Section 1 · Pentode

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Plate voltage	**200 V**	ClassA
Plate current	**13.2 mA**	ClassA
Maximum plate voltage	**330 V**	—
Maximum screen-grid voltage	**330 V**	—
respect to cathode	**200 V**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
respect to cathode	**200 V**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid No.l to plate — published value 1	**0 mA**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid No.l to plate — published value 2	**6 mA**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
PLATE VOLTAGE	**300 V**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE	**300 V**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Negative-bias value	**50 V**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Positive-bias value	**0 V**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PLATE DISSIPATION	**3 mA**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
For fixed-bias operation — published value 1	**0 mA**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
For fixed-bias operation — published value 2	**5 mA**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
For cathode-bias operation	**1 mA**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.

CHARACTERISTICS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	**500000 ohm**	ClassA
Transconductance	**8500 uS**	ClassA
Voltage (AC or DCI• — published value 1	**6.38 V**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Voltage (AC or DCI• — published value 2	**6.3 V**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Voltage (AC or DCI• — published value 3	**0.6 V**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Current — published value 1	**450 mA**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Current — published value 2	**30 mA**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Current — published value 3	**450 mA**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Warm-up time (Average)	**11**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
and heater	**8.8**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
and heater	**5.2**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Plate Supply Voltage	**200 V**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid-No.2 Supply Voltage	**115 V**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid-No.l Supply Voltage	**0 V**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Cathode Resistor	**68 ohm**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Plate Resistance (Approx)	**0.5 Mohm**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Transconductance	**8500**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Plate Current	**13.2 mA**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Grid-No.2 Current	**4 mA**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
transconductance (µmhos) - 60 — published value 1	**60 V**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
transconductance (µmhos) - 60 — published value 2	**-15 V**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Pin 1 -Grid No.l — published value 1	**1**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Pin 1 -Grid No.l — published value 2	**4**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Pin 2-Grid No.3, — published value 1	**2**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pin 2-Grid No.3, — published value 2	**5**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Internal	**6**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Shield	**7**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
Pin 3-Heater	**3**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
tween 150 and 300 volts .See Grid-No.a Input Rating Chart — published value 1	**150 V**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
tween 150 and 300 volts .See Grid-No.a Input Rating Chart — published value 2	**300 V**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
b at heater volts = 6.9	**6.9 V**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
GRID—Na2 VOLTS=115	**115 V**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
PLATE VOLTS=200	**200 V**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.
GRID-No.2 VOLTS=115	**115 V**	Published datasheet value; multiple values on one source row represent separate limits or operating conditions.

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