

ELECTRONIC TUBE REFERENCE

6973

Power - Beam (NOT sweep) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
BEAMPOWER

Beam-power tube designed as a power amplifier in compact high-fidelity audio equipment, providing substantial output from a relatively small envelope.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9EU	BASE PINS	9
NOMINAL HEATER	6.3 V / 450 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

9EU - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Beam Power	
PLATE RESISTANCE	35000 Ω
TRANSCONDUCTANCE	0.011 S
MAXIMUM PLATE VOLTAGE	440 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	12 W
MAXIMUM SCREEN DISSIPATION	2.5 W
MAXIMUM CATHODE CURRENT	100 mA
<i>High-fidelity beam-power output section.</i>	

Beam power tube used as a power amplifier in compact high-fidelity audio equipment.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1971 RCA HB3 Binder 3 of 7

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

1971 RCA HB3 BINDER 3 OF 7

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	450 mA	—
Plate voltage	250 V	ClassA
Screen voltage	250 V	ClassA
Grid voltage	-15 V	ClassA
Plate current	72 mA	ClassA
Load resistance	2500 ohm	ClassA
Power output	6.5 W	ClassA
Plate-to-plate load resistance	6600 ohm	ClassAB1;PushPull
Power output	24 W	ClassAB1;PushPull

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	11000 uS	ClassA

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.7 pF	—
Input capacitance	8 pF	—
Output capacitance	8.5 pF	—

1971 RCA HB3 Binder 5 of 7

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 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	450 mA	—
Heater voltage	6.3 V	—
Heater current	450 mA	—
Plate voltage	250 V	ClassA
Screen voltage	250 V	ClassA
Grid voltage	-15 V	ClassA
Plate current	72 mA	ClassA
Load resistance	2500 ohm	ClassA
Power output	6.5 W	ClassA
Plate-to-plate load resistance	6600 ohm	ClassAB1;PushPull
Power output	24 W	ClassAB1;PushPull

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	11000 uS	ClassA

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.7 pF	—
Input capacitance	8 pF	—
Output capacitance	8.5 pF	—



SOURCE DATA APPENDIX

1975 RCA RC30

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

1975 RCA RC30
Section 1 · Beam Power

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.1 to Plate	0.4 pF	Capacitance
Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3	9 pF	Capacitance

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	250 V	Characteristics
Grid-No.1 (Control-Grid) Voltage	-15 V	Characteristics
Plate Resistance (Approx.)	73000 ohm	Characteristics
Transconductance	4800 uS	Characteristics
Plate Current	46 mA	Characteristics
Grid-No.2 Current	3.5 mA	Characteristics
Grid-No.1 Voltage (Approx.) for plate current of 100 jiA	-40 V	Characteristics

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	440 V	MaximumRatings
Grid-No.2 Voltage	380 V	MaximumRatings
Plate Dissipation	12 W	MaximumRatings
Grid-No.2 Input	2 W	MaximumRatings
Grid-No.1 Voltage	-15 V	TypicalOperation;PublishedValue1
Grid-No.1 Voltage	-22 V	TypicalOperation;PublishedValue2
Grid-No.1 Voltage	-25 V	TypicalOperation;PublishedValue3
Cathode-Bias Resistor	230 ohm	TypicalOperation;PublishedValue1
Cathode-Bias Resistor	270 ohm	TypicalOperation;PublishedValue2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.1 Voltage	30 V	TypicalOperation;PublishedValue1
Grid-No.1 Voltage	44 V	TypicalOperation;PublishedValue2
Grid-No.1 Voltage	50 V	TypicalOperation;PublishedValue3
Grid-No.1 Voltage	48 V	TypicalOperation;PublishedValue4
Grid-No.1 Voltage	55 V	TypicalOperation;PublishedValue5
Zero-Signal Plate Current	92 mA	TypicalOperation;PublishedValue1
Zero-Signal Plate Current	58 mA	TypicalOperation;PublishedValue2
Zero-Signal Plate Current	50 mA	TypicalOperation;PublishedValue3
Zero-Signal Plate Current	80 mA	TypicalOperation;PublishedValue4
Zero-Signal Plate Current	77 mA	TypicalOperation;PublishedValue5
Maximum-Signal Plate Current	105 mA	TypicalOperation;PublishedValue1
Maximum-Signal Plate Current	106 mA	TypicalOperation;PublishedValue2
Maximum-Signal Plate Current	107 mA	TypicalOperation;PublishedValue3
Maximum-Signal Plate Current	96 mA	TypicalOperation;PublishedValue4
Maximum-Signal Plate Current	92 mA	TypicalOperation;PublishedValue5
Zero-Signal Grid-No.2 Current	3.5 mA	TypicalOperation;PublishedValue1
Zero-Signal Grid-No.2 Current	2.5 mA	TypicalOperation;PublishedValue2
Zero-Signal Grid-No.2 Current	6 mA	TypicalOperation;PublishedValue3
Zero-Signal Grid-No.2 Current	5 mA	TypicalOperation;PublishedValue4
Maximum-Signal Grid-No.2 Current	16 mA	TypicalOperation;PublishedValue1
Maximum-Signal Grid-No.2 Current	14 mA	TypicalOperation;PublishedValue2
Maximum-Signal Grid-No.2 Current	13.7 mA	TypicalOperation;PublishedValue3
Maximum-Signal Grid-No.2 Current	14 mA	TypicalOperation;PublishedValue4
Maximum-Signal Grid-No.2 Current	14 mA	TypicalOperation;PublishedValue5
(Plate-to-plate)	8000 ohm	TypicalOperation;PublishedValue1
(Plate-to-plate)	7500 ohm	TypicalOperation;PublishedValue2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
(Plate-to-plate)	8000 ohm	TypicalOperation;PublishedValue3
(Plate-to-plate)	5500 ohm	TypicalOperation;PublishedValue4
(Plate-to-plate)	6000 ohm	TypicalOperation;PublishedValue5
Total Harmonic Distortion	2 %	TypicalOperation;PublishedValue1
Total Harmonic Distortion	1.5 %	TypicalOperation;PublishedValue2
Total Harmonic Distortion	2 %	TypicalOperation;PublishedValue3
Total Harmonic Distortion	2 %	TypicalOperation;PublishedValue4
Total Harmonic Distortion	4 %	TypicalOperation;PublishedValue5
For fixed-bias operation	0.5 megohm	MaximumCircuitValues
For cathode-bias operation	1 megohm	MaximumCircuitValues
Grid-No.2 Input	1.75 W	MaximumRatings
Plate Supply Voltage	375 V	TypicalOperation;PublishedValue1
Plate Supply Voltage	370 V	TypicalOperation;PublishedValue2
Grid-No.1 Voltage'	-33.5 V	TypicalOperation
Zero-Signal Cathode Current	62 mA	TypicalOperation;PublishedValue1
Zero-Signal Cathode Current	74 mA	TypicalOperation;PublishedValue2
Maximum-Signal Cathode Current	95 mA	TypicalOperation;PublishedValue1
Maximum-Signal Cathode Current	84 mA	TypicalOperation;PublishedValue2
Effective Load Resistance (Plate-to-plate)	12500 ohm	TypicalOperation;PublishedValue1
Effective Load Resistance (Plate-to-plate)	13000 ohm	TypicalOperation;PublishedValue2
Total Harmonic Distortion	1.5 %	TypicalOperation;PublishedValue1
Total Harmonic Distortion	1.2 %	TypicalOperation;PublishedValue2
Maximum-Signal Power Output	18.5 W	TypicalOperation;PublishedValue1
Maximum-Signal Power Output	15 W	TypicalOperation;PublishedValue2
For fixed-bias operation	0.1 megohm	MaximumCircuitValues
For cathode-bias operation	1 megohm	MaximumCircuitValues