

ELECTRONIC TUBE REFERENCE

6GJ5A

Power - TV Horizontal Output (sweep) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
BEAMPOWER

Beam-power tube designed as a high-efficiency horizontal-deflection amplifier in television receivers.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9QK	BASE PINS	9
NOMINAL HEATER	6.3 V / 1.2 A	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

9QK - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1	–	G2 – Screen Grid	CONNECTED
PIN2	–	G1 – Control Grid	CONNECTED
PIN3	–	G3 – Suppressor Grid	CONNECTED
PIN3	–	K – Cathode	CONNECTED
PIN4	–	H – Heater	CONNECTED
PIN5	–	H – Heater	CONNECTED
PIN6	–	G1 – Control Grid	CONNECTED
PIN7	–	G2 – Screen Grid	CONNECTED
PIN9	–	–	IC
CAP1	A	P – Plate (Anode)	CONNECTED

SECTION RATINGS

SECTION1 Beam Power	
PLATE RESISTANCE	15000 Ω
TRANSCONDUCTANCE	0.0071 S
AMPLIFICATION FACTOR	4.4
MAXIMUM PLATE VOLTAGE	770 V
MAXIMUM SCREEN VOLTAGE	220 V
MAXIMUM PLATE DISSIPATION	17.5 W
MAXIMUM SCREEN DISSIPATION	3.5 W
MAXIMUM CATHODE CURRENT	175 mA
<i>Horizontal-deflection beam-power amplifier.</i>	

Beam-power tube used as a high-efficiency horizontal-deflection amplifier in television receivers.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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	1.2 A	—
DC plate-supply voltage	770 V	HorizontalDeflection
Peak positive-pulse plate voltage	6500 V	HorizontalDeflection
DC screen voltage	220 V	HorizontalDeflection
Average cathode current	175 mA	HorizontalDeflection
Plate dissipation	17.5 W	HorizontalDeflection

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Television horizontal-deflection amplifier	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA
Screen voltage	150 V	ClassA
Plate current	70 mA	ClassA
Transconductance	7100 uS	ClassA
Plate resistance	15000 ohm	ClassA

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.26 pF	—

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For fixed-bias operation 2.2	2.2 MΩ	Published in approved 17GJ5A target datasheet entry; Section1
For cathode-bias operation 2.2	2.2 MΩ	Published in approved 17GJ5A target datasheet entry; Section1
DC Plate Supply Voltage	770 V	Published in approved 17GJ5A target datasheet entry; Section1
Peak Positive-Pulse Plate Voltage*	6500 V	Published in approved 17GJ5A target datasheet entry; Section1
Peak Negative-Pulse Plate Voltage	1500 V	Published in approved 17GJ5A target datasheet entry; Section1
DC Grid-No.2 Voltage	220 V	Published in approved 17GJ5A target datasheet entry; Section1
DC Grid-No.1 Voltage	-55 V	Published in approved 17GJ5A target datasheet entry; Section1
Peak Negative-Pulse Grid-No.1 Voltage	330 V	Published in approved 17GJ5A target datasheet entry; Section1
Peak Cathode Current	550 mA	Published in approved 17GJ5A target datasheet entry; Section1
Average Cathode Current	175 mA	Published in approved 17GJ5A target datasheet entry; Section1
Plate Dissipation*	17.5 W	Published in approved 17GJ5A target datasheet entry; Section1
Grid-No.2 Input	3.5 W	Published in approved 17GJ5A target datasheet entry; Section1
For grid-resistor-bias operation*	1 MΩ	Published in approved 17GJ5A target datasheet entry; Section1
# Pulse duration must not exceed 15% of a horizontal scanning cycle (	10 microseconds	Published in approved 17GJ5A target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Current 4.1 5.6 6.3	8 V	Published in approved 17GJ5A target datasheet entry; Section1
Peak Heater-Cathode 0.6 0.45 0.41	300 mA	Published in approved 17GJ5A target datasheet entry; Section1
Plate-Supply Voltage 600	600 V	Published in approved 17GJ5A target datasheet entry; Section1
DC Plate Voltage 140	275 V	Published in approved 17GJ5A target datasheet entry; Section1
Grid-No.2 (Screen-Grid) Supply Voltage	600 V	Published in approved 17GJ5A target datasheet entry; Section1
DC Grid-No.2 Voltage	275 V	Published in approved 17GJ5A target datasheet entry; Section1
DC Grid-No.1 (Control-Grid) Voltage	-50 V	Published in approved 17GJ5A target datasheet entry; Section1
Cathode Current 22	20 mA	Published in approved 17GJ5A target datasheet entry; Section1
Plate Dissipation 1.8	2.4 W	Published in approved 17GJ5A target datasheet entry; Section1
Grid-No.2 Input*	0.55 W	Published in approved 17GJ5A target datasheet entry; Section1
DC Plate Voltage 100	170 V	Published in approved 17GJ5A target datasheet entry; Section1
DC Grid-No.2 Voltage	120 V	Published in approved 17GJ5A target datasheet entry; Section1
DC Grid-No.1 Voltage -3	-1.2 V	Published in approved 17GJ5A target datasheet entry; Section1
voltage to	100 V	Published in approved 17GJ5A target datasheet entry; Section1
receivers to	50 V	Published in approved 17GJ5A target datasheet entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) 6.3 12.6	16.8 V	Published in approved 17GJ5A target datasheet entry; Section1
Heater Current 1.2 0.6	450 mA	Published in approved 17GJ5A target datasheet entry; Section1
Heater Warm-up Time (Average) 11	11 seconds	Published in approved 17GJ5A target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to Plate	0.26 pF	Published in approved 17GJ5A target datasheet entry; Section1
Plate Voltage 150 60	250 V	Published in approved 17GJ5A target datasheet entry; Section1
Grid-No.2 Voltage 150 150	150 V	Published in approved 17GJ5A target datasheet entry; Section1
Grid-No.1 Voltage -22.5 0	-22.5 V	Published in approved 17GJ5A target datasheet entry; Section1
Plate Resistance (Approx.)	15000 Ω	Published in approved 17GJ5A target datasheet entry; Section1
Transconductance	7100 μS	Published in approved 17GJ5A target datasheet entry; Section1
390"	70 mA	Published in approved 17GJ5A target datasheet entry; Section1
Grid-No.1 Voltage for plate current of	1 mA	Published in approved 17GJ5A target datasheet entry; Section1
Grid-No.1 Voltage for plate current of 1 mA	-42 V	Published in approved 17GJ5A target datasheet entry; Section1
Plate Resistance (Approx.)	0.35 MΩ	Published in approved 17GJ5A target datasheet entry; Section1
Plate Current 15	10 mA	Published in approved 17GJ5A target datasheet entry; Section1
Grid-No.2 Current	3 mA	Published in approved 17GJ5A target datasheet entry; Section1
For fixed-bias operation 0.5	1 MΩ	Published in approved 17GJ5A target datasheet entry; Section1
For cathode-bias operation 0.5	2.2 MΩ	Published in approved 17GJ5A target datasheet entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate to Cathode, Heater, Grid No.2, and Grid No.3	6.5 pF	Published in approved 17GJ5A target datasheet entry; Section1