

ELECTRONIC TUBE REFERENCE

7905

Power - Beam (NOT sweep) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
BEAMPOWER

Beam-power RF tube designed for communications or transmitting power-amplifier applications, providing substantial radio-frequency output from a compact envelope.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	9
NOMINAL HEATER	6.3 V / 650 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Beam Power	
TRANSCONDUCTANCE	0.0067 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	10 W
MAXIMUM SCREEN DISSIPATION	1.5 W
Published promoted values applied where semantically applicable; additional source-table values retained in TUBE_SECTION_PARAMETER.	

Industrial quick-heating-filament beam power tube for RF oscillator, amplifier, and frequency-multiplier service in mobile communications.

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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC) – published value 1	6.3 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Voltage (AC or DC) – published value 2	10 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
ment may be subjected to - voltage variations as great	6 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Current at 6.3 volts – published value 1	6.3 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Current at 6.3 volts – published value 2	0 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Current at 6.3 volts – published value 3	65 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
and grid No 2 – published value 1	2 pF	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
and grid No 2 – published value 2	8.5 pF	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
and grid No 2 – published value 1	2 pF	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
and grid No 2 – published value 2	5.5 pF	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	200 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Grid No 3	3	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Grid-No.2 Voltage	185 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Grid-No.1 Voltage	-6 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Mu-Factor, Grid No.2 to Grid No 1 – published value 1	1	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Mu-Factor, Grid No.2 to Grid No 1 – published value 2	11.5	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Transconductance	6700	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Plate Current	36	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Grid-No.2 Current	2 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Pin 1 -Filament (-) – published value 1	1	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Pin 1 -Filament (-) – published value 2	6	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Pin 2 -Grid No.1 – published value 1	2	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Pin 2 -Grid No.1 – published value 2	7	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Pin 3 -Grid No.2 – published value 1	3	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pin 3 -Grid No.2 – published value 2	8	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Pin 4 - LC (See NOTE) – published value 1	4	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Pin 4 - LC (See NOTE) – published value 2	9	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Plate Voltage – published value 1	300 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Plate Voltage – published value 2	300 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.2 Voltages – published value 1	160 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.2 Voltages – published value 2	185 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Peak RF Grid-No.1 Voltage – published value 1	41 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Peak RF Grid-No.1 Voltage – published value 2	43 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Plate Current – published value 1	50 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Plate Current – published value 2	60 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.2 Current – published value 1	2.5 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.2 Current – published value 2	4 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.1 Current (Approx) – published value 1	2 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Grid-No.1 Current (Approx) – published value 2	2.2 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Useful Power Output h (Approx.) – published value 1	5.5 W	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Useful Power Output h (Approx.) – published value 2	7 W	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Plate Voltage	250 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.2 Voltagei	250 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Peak RF Grid-No.1 Voltage	75 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Plate Current	60 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.2 Current	2.5 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.1 Current (Approx)	2.1 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Useful Power Output h (Approx)	6.5	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Plate Voltage – published value 1	250 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Plate Voltage – published value 2	300 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Grid No 3 – published value 1	3	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Grid No 3 – published value 2	1	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Grid–No.2 Voltage° – published value 1	200 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid–No.2 Voltage° – published value 2	215 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Peak RF Grid–No.1 Voltage – published value 1	60 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Peak RF Grid–No.1 Voltage – published value 2	87 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Plate Current – published value 1	45 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Plate Current – published value 2	50 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid–No.2 Current – published value 1	3 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid–No.2 Current – published value 2	4 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid–No.2 Current – published value 3	3.4 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid–No.1 Current (Approx.)	1 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Useful Power Outputj (Approx.) – published value 1	2 W	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Useful Power Outputj (Approx.) – published value 2	5 W	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Useful Power Outputj (Approx.) – published value 3	3.5 W	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Plate Voltage – published value 1	250 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Plate Voltage – published value 2	250 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to plate – published value 1	0 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Grid No.1 to plate – published value 2	14 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC PLATE VOLTAGE	300 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
SUPPLY VOLTAGE	300 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC GRID-No.2 VOLTAGE	250 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC GRID-No.1 (CONTROL~RID) VOLTAGE	-125 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC PLATE CURRENT	60 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC GRID-No.2 CURRENT	10 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC GRID-No.1 CURRENT	5 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
PLATE INPUT	18 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
GRID-No.2 INPUT	1.5 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
PLATE DISSIPATION	10 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.1-Circuit Resistance – published value 1	0 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Grid-No.1-Circuit Resistance – published value 2	1 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC PLATE VOLTAGE	250 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC GRID-No.2 VOLTAGE	250 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC GRID-No.1 VOLTAGE	-125 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC GRID-No.1 CURRENT	5 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
PLATE INPUT	15 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
GRID-No.2 INPUT	1.4 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
PLATE DISSIPATION	7 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Grid-No.1-Circuit Resistance	0.1 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC GRID-No.2 SUPPLY VOLTAGE	300 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC GRID-No.1 VOLTAGE	-125 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.



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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heating Time	1 s	LessThan
Class A Plate Voltage	200 V	ClassA
Class A Screen Voltage	185 V	ClassA
Mu Factor Grid No.2 to Grid No.1	11.5	ClassA
Class A Plate Current	36 mA	ClassA

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to Plate Capacitance	0.14 pF	Maximum

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
RF DC Plate Current	60 mA	ClassC;ICAS;175MHz
RF DC Screen Current	10 mA	ClassC;ICAS;175MHz
Useful Power Output	7 W	ClassC;ICAS;175MHz

TUBE TINKER

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