



ELECTRONIC TUBE REFERENCE

8077

Power - Pentode Single (NOT beam) (under 10W) electronic tube

CONSOLIDATED TECHNICAL
DATA

1 SECTION
CONSTRUCTION
PENTODE

Mobile-communications power pentode for Class C RF amplification, oscillation, and frequency multiplication to approximately 40 MHz.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	9
NOMINAL HEATER	13.5 V / 275 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	50000 Ω
TRANSCONDUCTANCE	0.0115 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	175 V
MAXIMUM PLATE DISSIPATION	5 W
MAXIMUM SCREEN DISSIPATION	1.2 W
MAXIMUM CATHODE CURRENT	30 mA
<i>Alias/co-designation of 7054; Mobile power pentode; RF and AF operating modes retained as parameters.</i>	

Industrial power pentode for Class C RF amplification, oscillation, and frequency multiplication to 40 MHz in mobile communications.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1940 RCA

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

1940 RCA

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
RFPowerOutput	4 W	UpTo40MHz

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	RFPower_FrequencyMultiplier_Modulator_AudioPower text	—



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 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC)a – published value 1	13.5 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Voltage (AC or DC)a – published value 2	1.5 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Current at heater volts = 13 5 – published value 1	13 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Current at heater volts = 13 5 – published value 2	5 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Current at heater volts = 13 5 – published value 3	0 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Current at heater volts = 13 5 – published value 4	275 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Grid – published value 1	0	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Grid – published value 2	63	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
except plate	10.2	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
except grid No 1 – published value 1	1	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
except grid No 1 – published value 2	3.5	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Heater Voltage	13.5 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Plate Supply Voltage	250 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Grid No.2 Supply Voltage	150 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Plate Resistance (Approx)	0.1 Mohm	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Transconductance	11500	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Plate Current	19 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.2 Current	3.5 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
plate μ a - 20 – published value 1	20 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
plate μ a - 20 – published value 2	-10 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Pin 2 -Grid No.1	2	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Pin 3 -Grid No.3, – published value 1	3	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Pin 3 -Grid No.3, – published value 2	7	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Internal	8	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Shield	9	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Pin 4 -Heater	4	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Pin 5 -Heater	5	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Heater Voltage – published value 1	13.5 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Heater Voltage – published value 2	13.5 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Heater Voltage – published value 3	13.5 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Plate Voltage – published value 1	200 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.
DC Plate Voltage – published value 3	300 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.2 Voltage – published value 1	115 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.2 Voltage – published value 2	145 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.2 Voltage – published value 3	175 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.1 Voltage – published value 1	-7 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.1 Voltage – published value 2	-9 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.1 Voltage – published value 3	-12 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	9 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	11 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Peak RF Grid-No.1 Voltage – published value 3	16 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Plate Current – published value 1	14.5 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Plate Current – published value 2	20 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Plate Current – published value 3	26 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
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	4.1 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.2 Current – published value 3	5.5 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	0.6 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.1 Current (Approx.) – published value 2	0.85 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.1 Current (Approx.) – published value 3	1 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Power Output (Approx) – published value 1	1.5 W	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Power Output (Approx) – published value 2	2.7 W	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Power Output (Approx) – published value 3	4 W	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.1 Voltage – published value 1	-16 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.1 Voltage – published value 2	-20 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.1 Voltage – published value 3	-25 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	19 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	24 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak RF Grid-No.1 Voltage – published value 3	31 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Plate Current – published value 1	11 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Plate Current – published value 2	15 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Plate Current – published value 3	20 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 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.2 Current – published value 2	3 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.2 Current – published value 3	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	0.3 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.1 Current (Approx.) – published value 2	0.45 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC Grid-No.1 Current (Approx.) – published value 3	0.6 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PLATE VOLTAGE	330 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
GRID-No.2 (SCREEN-GRID) VOLTAGE	180 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Negative-bias value	55 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Positive-bias value	0 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
GRID-No.2 INPUT	1 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
PLATE DISSIPATION	5 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
For fixed-bias operation – published value 1	0 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
For fixed-bias operation – published value 2	1 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
For cathode-bias operation	0.25 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.
DC GRID-No.2 (SCREEN-GRID) VOLTAGE	175 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
Negative-bias value	50 V	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC PLATE CURRENT	33 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC GRID-No.2 CURRENT – published value 1	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	5 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
DC GRID-No.1 CURRENT	3 mA	Published datasheet value; multiple numbers on a source row represent separate limits or operating conditions.
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.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
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.


SOURCE DATA APPENDIX

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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Heater-Cathode Voltage	120 V	AbsoluteValue
RF DC Plate Voltage	300 V	ClassC;CCS;40MHz
RF DC Plate Current	33 mA	ClassC;CCS;40MHz
Useful Power Output	2.5 W	FrequencyDoubler;300V

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to Plate Capacitance	0.063 pF	—
Grid No.1 Input Capacitance	10.2 pF	—
Plate Output Capacitance	3.5 pF	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Class A Plate Supply Voltage	250 V	ClassA
Class A Screen Supply Voltage	150 V	ClassA
Class A Plate Current	19 mA	ClassA
Class A Screen Current	3.5 mA	ClassA

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes,
and their source documents.

[Catalog](#) [Tube types](#) [Full books](#) [Blog](#) [Feedback & corrections](#)

© 2026 Tube Tinker