



ELECTRONIC TUBE REFERENCE

5915

Heptode electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

HEPTODE

Miniature dual-control heptode for computer, control, and switching applications, using separate control grids for logic, gating, and industrial control functions.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7CH	BASE PINS	7
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

7CH - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – G1	A	G1 – Control Grid	CONNECTED
PIN2 – G5	A	G5 – Fifth Grid	CONNECTED
PIN2 – K	A	K – Cathode	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
PIN6 – G4	A	G4 – Fourth Grid	CONNECTED
PIN7 – G3	A	G3 – Suppressor Grid	CONNECTED

SECTION RATINGS

SECTION1 Heptode	
TRANSCONDUCTANCE	0.002 S
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	1 W
MAXIMUM SCREEN DISSIPATION	1 W
MAXIMUM CATHODE CURRENT	20 mA
<i>Published ratings and characteristics promoted where applicable; additional source-table values retained in TUBE_SECTION_PARAMETER.</i>	

Miniature dual-control heptode intended for control applications.

SOURCE OPERATING CONDITIONS

1959 Telefunken

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

1959 TELEFUNKEN

Section 1 · Heptode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply voltage	150 V	Open
Screen-grid supply voltage	75 V	Open
Plate current minimum	5 mA	Open
Plate current maximum	6.5 mA	Open
Plate supply voltage	150 V	Blocked
Screen-grid supply voltage	75 V	Blocked
Plate current maximum	0.2 mA	Blocked
Plate cold voltage	550 V	—
Screen-grid cold voltage	550 V	—
Control-grid minimum voltage	-100 V	—
Suppressor-grid minimum voltage	-100 V	—
Heater-to-cathode voltage	120 V	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance control-grid	5.6 pF	—
Input capacitance screen-grid	6.8 pF	—
Output capacitance	8.3 pF	—
Control-grid to plate capacitance maximum	0.07 pF	—
Screen-grid to plate capacitance maximum	0.35 pF	—

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 · Heptode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage	6.3 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Current	300 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Electrodes and Heater	5.4	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Electrodes and Heater	6.9	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Electrodes and Heater	7.6	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Voltage – published value 1	67.5 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Voltage – published value 2	67.5 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grids-No.2 and No.4 Voltage – published value 1	67.5 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grids-No.2 and No.4 Voltage – published value 2	67.5 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grid-No.3 Voltage – published value 1	0 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.3 Voltage – published value 2	-4 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grid-No.1 Voltage – published value 1	0 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grid-No.1 Voltage – published value 2	0 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Transconductance	2000	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Transconductance	1100	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Pin 1 –Grid No.1 – published value 1	1	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Pin 1 –Grid No.1 – published value 2	5	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Pin 2 -Cathode, – published value 1	2	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Pin 2 -Cathode, – published value 2	6	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Pin 3 –Heater – published value 1	3	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Pin 3 –Heater – published value 2	7	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Pin 4 -Heater	4	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
GRID–No."1 SUPPLY VOLTAGE	1 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
DC CATHODE CURRENT	20 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage – published value 1	150 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Voltage – published value 2	150 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Voltage – published value 3	150 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Voltage – published value 1	0 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Voltage – published value 2	10 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Voltage – published value 3	0 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Supply Voltage – published value 1	75 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Supply Voltage – published value 2	75 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Supply Voltage – published value 3	75 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Voltage – published value 1	10 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Voltage – published value 2	0 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Voltage – published value 3	0 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Resistance – published value 1	20000 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Resistance – published value 2	20000 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Resistance – published value 3	20000 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Resistance – published value 1	47000 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Resistance – published value 2	47000 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Resistance – published value 3	47000 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Current – published value 1	0 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Current – published value 2	0 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Current – published value 3	5.8 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grids–No.2 6 Na.4	6	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Current – published value 1	0 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Current – published value 2	14 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Current – published value 3	9 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Current	0.2 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Current – published value 1	2 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Current – published value 2	5 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current – published value 3	6.5 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Note Ia	6.3 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
on neater, plate-supply volts = 150, grid-No.3 supply volts =	150 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
0, grids-No.2 6 No.4 sup Ply volts = 75, grl d-No.1 suDPly.volts – published value 1	0 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
0, grids-No.2 6 No.4 sup Ply volts = 75, grl d-No.1 suDPly.volts – published value 2	6 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
0, grids-No.2 6 No.4 sup Ply volts = 75, grl d-No.1 suDPly.volts – published value 3	75 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
– –10, plate-Circuit resistance (ohms) = 20000, grid-No.3 cl rcuit – published value 1	10 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
– –10, plate-Circuit resistance (ohms) = 20000, grid-No.3 cl rcuit – published value 2	20000 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
r e515t once (0hm S) = 47000, grid 5–N0.2 8 No.4 series rest 5t0r – published value 1	47000 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
r e515t once (0hm S) = 47000, grid 5–N0.2 8 No.4 series rest 5t0r – published value 2	5 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
r e515t once (0hm S) = 47000, grid 5–N0.2 8 No.4 series rest 5t0r – published value 3	8 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
r e515t once (0hm S) = 47000, grid 5–N0.2 8 No.4 series rest 5t0r – published value 4	5 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
(ohms) = 470, and grid xo. 1 –circuit resistance (ohms) = 47000 – published value 1	470 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
(ohms) = 470, and grid xo. 1 –circuit resistance (ohms) = 47000 – published value 2	1 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
(ohms) = 470, and grid xo. 1 –circuit resistance (ohms) = 47000 – published value 3	47000 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
same as /or Mate la exc epi Lhat grid–No.3 Supply volL5 = –10	10 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.i to Plate	0.08 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grid No.3 to Plate	0.35 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grid No.l to Grid No.3. 0.15 max	0.15 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
PLATE VOLTAGE	250 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
GRIDS–No.2 and No.4 SUPPLY VOLTAGE	250 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Negative bias value	100 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Positive bias value	0 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
GRIDS–No.2 and No.4 INPUT	1 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
PEAK CATHODE CURRENT	70 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater negative with respect to cathode	90 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Heater positive with respect to cathode	90 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
For fixed-bias operation – published value 1	0 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
For fixed-bias operation – published value 2	5 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
for cathode-bias operation – published value 1	1 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
for cathode-bias operation – published value 2	0 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.