



ELECTRONIC TUBE REFERENCE

5750

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

HEPTODE

Industrial pentagrid converter for oscillator and mixer service in communications and specialized receiving equipment. Its multi-grid construction provides frequency conversion with high plate resistance and conventional 6.3 V heater operation.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	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

SECTION RATINGS

SECTION 1 Heptode	
PLATE RESISTANCE	1000000 Ω
TRANSCONDUCTANCE	0.000475 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	100 V
MAXIMUM PLATE DISSIPATION	1 W
MAXIMUM SCREEN DISSIPATION	1 W
MAXIMUM CATHODE CURRENT	14 mA
MAXIMUM HEATER-CATHODE VOLTAGE	90 V
<i>Pentagrid-converter values; conversion transconductance promoted.</i>	

Pentagrid converter equivalent-family type to 6BE6 for frequency-changer service.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1960 RCA Industrial and Communications Types

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

1960 RCA INDUSTRIAL AND COMMUNICATIONS TYPES

Section 1 · Heptode

CROSSREFERENCE

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Prototype / equivalent family	6BE6	—

APPLICATION

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Pentagrid converter / frequency changer	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1968 General Electric Co

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

1968 GENERAL ELECTRIC CO

Section 1 · Heptode

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	250 V	ConverterService
Screen Voltage	100 V	ConverterService
Oscillator Grid Voltage RMS	10 V	SeparateExcitation

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Oscillator Transconductance	7800 μ S	SeparateExcitation
Oscillator Amplification Factor	20	SeparateExcitation
Plate Current	2.6 mA	ConverterService



SOURCE OPERATING CONDITIONS

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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.
trodes (Oscillator input)	5.5	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grid No.1 to cathode & grid No.5	3	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Cathode 6 grid No.5 to all other	6	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
electrodes except grid No 1 – published value 1	1	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
electrodes except grid No 1 – published value 2	15	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
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 2 -Cathode, – published value 3	2	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.
Positive-bias value	0 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Voltage – published value 1	100 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Voltage – published value 2	250 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grids-No.2 & No.4 Voltage – published value 1	100 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grids-No.2 & No.4 Voltage – published value 2	100 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grid-No.3 Voltage – published value 1	-1.5 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	-1.5 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	10 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grid-No.1 Resistor – published value 1	20000 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grid-No.1 Resistor – published value 2	20000 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Resistance (Approx.) – published value 1	0.4 Mohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Resistance (Approx.) – published value 2	1 Mohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Conversion Transconductance – published value 1	455	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Conversion Transconductance – published value 2	475	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Current – published value 1	2.6 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Current – published value 2	2.6 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grids-No.2 ~ No.4 Current – published value 1	7.5 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grids-No.2 ~ No.4 Current – published value 2	7.5 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grid-No.1 Current – published value 1	0.5 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.1 Current – published value 2	0.5 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Total Cathode Current – published value 1	10.6 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Total Cathode Current – published value 2	10.6 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate & Grids-No.2 & No.4 Voltage	100 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grid-No.3 Voltage	0 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Oscillator Transconductance	7800	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Cathode Current	25 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
plate μ a. = 10 – published value 1	10 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
plate μ a. = 10 – published value 2	-17 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Between grid No.i and grids No.2 8 No.JF connec tetl to plate	8	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
a frequency of 25 cycles per second	25	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Under the fol lowing conditions: heater volts = 7.5 cycled	7.5 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
one minute on and one minute off, heater 135 volts positive	135 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.3 to plate	0.3 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grid No.3 to grid No.1	0.15 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
PLATE VOLTAGE	330 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Negative-bias value	55 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
SUPPLY VOLTAGE	330 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
GRIDS-No.2 3 No.4 VOLTAGE – published value 1	3 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
GRIDS-No.2 3 No.4 VOLTAGE – published value 2	110 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
TOTAL CATHODE CURRENT	15.5 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
GRIDS-No.2 & No.4 INPUT	1.1 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
PLATE DISSIPATION	1.1 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

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