



ELECTRONIC TUBE REFERENCE

DK92

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

HEPTODE

Battery heptode frequency changer for oscillator-mixer operation in portable superheterodyne receivers. Its low-power directly heated construction provides useful conversion gain from economical battery supplies.

GENERAL CHARACTERISTICS

BASE DESIGNATION	B7G	BASE PINS	7
NOMINAL HEATER	1.4 V / 50 mA	PARALLEL HEATER	1.4 V / 50 mA
HEATING	Direct	SERIES OPERATION	Capable
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Heptode	
PLATE RESISTANCE	1000000 Ω
TRANSCONDUCTANCE	0.000325 S
AMPLIFICATION FACTOR	7.5
MAXIMUM PLATE VOLTAGE	120 V
MAXIMUM SCREEN VOLTAGE	90 V
MAXIMUM PLATE DISSIPATION	0.2 W
MAXIMUM SCREEN DISSIPATION	0.2 W
MAXIMUM CATHODE CURRENT	4 mA
Heptode frequency changer for battery sets.	

Directly heated heptode frequency converter for battery-operated receiver mixer service.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1961 Ferranti Technical Handbook

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

1961 FERRANTI TECHNICAL HANDBOOK

Section 1 · Heptode

APPLICATION

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Frequency changer / oscillator-mixer	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Mullard

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

1963 MULLARD

Section 1 · Heptode

CHARACTERISTICS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament Voltage Series	1.3 V	—
Filament Current Series	48 mA	—
Filament Voltage Parallel	1.4 V	—
Filament Current Parallel	50 mA	—
Conversion Transconductance	325 μ S	—
Plate Resistance	650000 ohm	—

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Supply Voltage	85 V	FrequencyChanger
Screen Voltage Approximate	60 V	FrequencyChanger

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Oscillator Grid Voltage Approximate	30 V	FrequencyChanger
Oscillator Drive Voltage	4 V	RMS
Total Cathode Current	2.55 mA	FrequencyChanger
Plate Current	0.7 mA	FrequencyChanger
Screen Current	0.15 mA	FrequencyChanger
Oscillator Current	1.6 mA	FrequencyChanger
Grid Current	100 uA	FrequencyChanger
Maximum Plate Supply Voltage	140 V	Absolute
Maximum Plate Voltage	120 V	—
Maximum Screen Voltage	90 V	—
Maximum Cathode Current	4 mA	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Philips Electron Tubes Handbook V1

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1963 PHILIPS ELECTRON TUBES HANDBOOK V1

Section 1 · Heptode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate capacitance	8.4 pF	—
Grid-3 capacitance	7.5 pF	—
Grid-2 capacitance	4.8 pF	—
Grid-1 capacitance	3.9 pF	—
Plate-to-grid-3 capacitance	—0.36 pF	—
Plate-to-grid-1 capacitance	—0.11 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	85 V	SeparateExcitation
Screen voltage	30 V	SeparateExcitation
Plate current	0.65 mA	SeparateExcitation
Oscillator plate voltage	85 V	OscillatorSection
Oscillator screen current	2.5 mA	OscillatorSection

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	1 Mohm	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1967 Mullard Receiving Tubes for Maintenance

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1967 MULLARD RECEIVING TUBES FOR MAINTENANCE
Section 1 · Heptode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
All-Electrode Capacitance	8.5 pF	PublishedCapacitance
Grid3-to-All Capacitance	7.5 pF	PublishedCapacitance
Grid2-to-All Capacitance	5 pF	PublishedCapacitance
Grid1-to-All Capacitance	4 pF	PublishedCapacitance

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	85 V	FrequencyChanger
Grid4 Voltage	60 V	FrequencyChanger
Grid2 Voltage	30 V	FrequencyChanger
Oscillator Drive RMS	4 V	FrequencyChanger

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode Current	2.55 mA	FrequencyChanger
Plate Current	700 uA	FrequencyChanger
Grid4 Current	150 uA	FrequencyChanger
Grid2 Current	1.6 mA	FrequencyChanger
Grid1 Current	100 uA	FrequencyChanger
Conversion Conductance	325 uS	FrequencyChanger
Plate Resistance	650 kohm	FrequencyChanger
Oscillator Transconductance	900 uS	FrequencyChanger
Oscillator Mu	7.5	FrequencyChanger
Supply Voltage Absolute	140 V	PublishedLimits
Supply Voltage	120 V	PublishedLimits
Plate Voltage	90 V	PublishedLimits
Grid4 Voltage	90 V	PublishedLimits
Grid2 Voltage	60 V	PublishedLimits
Cathode Current	4 mA	PublishedLimits


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1968 Mazda Belvu

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

1968 MAZDA BELVU

Section 1 · Heptode

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	FrequencyConverter text	—


SOURCE DATA APPENDIX

1999 Philips 0-D

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

1999 PHILIPS 0-D
Section 1 · Heptode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Conversion transconductance	325 μ S	SeparateExcitation
Plate resistance	1 M Ω	SeparateExcitation

TUBE TINKER

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