



ELECTRONIC TUBE REFERENCE

EBF83

Voltage - Pentode or Tetrode (under 100V) electronic tube

CONSOLIDATED TECHNICAL DATA

3 SECTIONS

CONSTRUCTION

DIODE-DIODE-PENTODE

Double-diode pentode for receiver amplification and detector service, notable for useful operation at unusually low electrode voltages. Two diodes provide associated detection and rectification functions.

GENERAL CHARACTERISTICS

BASE DESIGNATION	NOVAL	BASE PINS	9
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	200000 Ω
TRANSCONDUCTANCE	0.0021 S
MAXIMUM PLATE VOLTAGE	50 V
MAXIMUM SCREEN VOLTAGE	50 V
MAXIMUM CATHODE CURRENT	5 mA
<i>Promoted from clearly identified published ratings/characteristics; additional operating points, capacitances, detector data, microwave data, and special-quality limits are retained in TUBE_SECTION_PARAMETER.</i>	

SECTION2 Diode	
NOMINAL OUTPUT CURRENT	0.8 mA
PEAK FORWARD CURRENT	5 mA
<i>Promoted from clearly identified published ratings/characteristics; additional operating points, capacitances, detector data, microwave data, and special-quality limits are retained in TUBE_SECTION_PARAMETER.</i>	

SECTION3 Diode	
<i>No fixed ratings recorded.</i>	
<i>Promoted from clearly identified published ratings/characteristics; additional operating points, capacitances, detector data, microwave data, and special-quality limits are retained in TUBE_SECTION_PARAMETER.</i>	

Double-diode variable-mu RF pentode for battery-operated equipment and low-voltage receiver service.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Philips Electron Tubes Handbook V1a

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

1963 PHILIPS ELECTRON TUBES HANDBOOK V1A

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	RFIFAmplifier
Screen voltage	25 V	RFIFAmplifier
Control-grid voltage	-2 V	RFIFAmplifier
Plate current	1.7 mA	RFIFAmplifier
Screen current	0.5 mA	RFIFAmplifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	2100 μ S	Section1
Plate resistance	200000 Ω	Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate capacitance	5.2 pF	Section1
Grid capacitance	5 pF	Section1
Grid-to-plate capacitance maximum	0.0025 pF	Section1

1963 PHILIPS ELECTRON TUBES HANDBOOK V1A

Section 2 · Diode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Diode capacitance	2.5 pF	Diode1

1963 PHILIPS ELECTRON TUBES HANDBOOK V1A

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Diode capacitance	2.5 pF	Diode2



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

1967 Mullard Receiving and Amplifying Valves

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

1967 MULLARD RECEIVING AND AMPLIFYING VALVES

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	0.12 mA	PlateAndScreen=6.3V
Screen Current	0.04 mA	PlateAndScreen=6.3V
Transconductance	450 uS	PlateAndScreen=6.3V
Plate Resistance	0.65 Mohm	PlateAndScreen=6.3V
Plate Current	0.45 mA	PlateAndScreen=12.6V
Screen Current	0.14 mA	PlateAndScreen=12.6V
Transconductance	1000 uS	PlateAndScreen=12.6V
Plate Resistance	1 Mohm	PlateAndScreen=12.6V
Plate Current	1.7 mA	PlateAndScreen=25V
Screen Current	0.5 mA	PlateAndScreen=25V
Transconductance	2100 uS	PlateAndScreen=25V
Plate Resistance	0.2 Mohm	PlateAndScreen=25V
Plate Resistance	200000 ohm	—
Transconductance	2100 uS	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	50 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Screen Voltage	50 V	—
Maximum Cathode Current	5 mA	—
Interelectrode Capacitance Data Published	1	SourceTablePresent

1967 MULLARD RECEIVING AND AMPLIFYING VALVES

Section 2 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Anode Current	800 uA	EachDiode
Maximum Peak Anode Current	5 mA	EachDiode
Nominal Output Current	0.8 mA	—
Peak Forward Current	5 mA	—
Interelectrode Capacitance Data Published	1	SourceTablePresent



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

1999 Philips E-Z

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

1999 PHILIPS E-Z

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	300 mA	—
Typical plate voltage	25 V	—
Transconductance	2100 uS	—
Plate resistance	0.2 Mohm	—
Plate current	1.7 mA	PlateAndScreenVoltage=25V
Screen current	0.5 mA	PlateAndScreenVoltage=25V

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	50 V	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate output capacitance	5.2 pF	—
Grid input capacitance	5 pF	—
Plate-grid capacitance maximum	0.0025 pF	—

1999 PHILIPS E-Z

Section 2 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum diode current	0.8 mA	—
Maximum diode peak current	5 mA	—

TUBE TINKER

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