



ELECTRONIC TUBE REFERENCE

DAF91

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

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

DIODE-PENTODE

Directly heated battery diode-pentode, equivalent to 1S5, combining signal detection with audio preamplification. Its low-consumption 1.4 V, 50 mA filament and high-resistance pentode suit portable radio receivers.

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	Dissimilar

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	500000 Ω
TRANSCONDUCTANCE	0.00072 S
AMPLIFICATION FACTOR	13.5
MAXIMUM PLATE VOLTAGE	90 V
MAXIMUM SCREEN VOLTAGE	90 V
MAXIMUM PLATE DISSIPATION	0.25 W
MAXIMUM SCREEN DISSIPATION	0.06 W
MAXIMUM CATHODE CURRENT	4.5 mA
<i>Promoted from clearly identified published ratings/characteristics; additional operating points, capacitances, rectifier conditions, and application-specific values are retained in TUBE_SECTION_PARAMETER.</i>	

SECTION2 Diode	
MAXIMUM CATHODE CURRENT	0.2 mA
PEAK INVERSE VOLTAGE	100 V
NOMINAL OUTPUT CURRENT	200 mA
PEAK FORWARD CURRENT	1.2 A
<i>Promoted from clearly identified published ratings/characteristics; additional operating points, capacitances, rectifier conditions, and application-specific values are retained in TUBE_SECTION_PARAMETER.</i>	

Equivalent designation printed on the 1S5 source for the directly heated detector and audio-preamplifier diode-pentode.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1951 Mullard Valve and Service Manual

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

1951 MULLARD VALVE AND SERVICE MANUAL

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode Voltage	90 V	—
Screen Voltage	90 V	—
Anode Current	2.7 mA	—
Screen Current	0.5 mA	—



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 · Pentode

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	AF amplifier	—

1961 FERRANTI TECHNICAL HANDBOOK

Section 2 · Diode

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Detector diode	—

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Philips Electron Tubes Handbook V1

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

1963 PHILIPS ELECTRON TUBES HANDBOOK V1

Section 1 · Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate capacitance	2.8 pF	Section1
Grid capacitance	2 pF	Section1
Grid-to-plate capacitance maximum	0.4 pF	Section1
Diode capacitance	1.5 pF	Section1

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	45 V	AudioAmplifier
Screen voltage	45 V	AudioAmplifier
Plate current	0.75 mA	AudioAmplifier
Screen current	0.15 mA	AudioAmplifier
Plate voltage	90 V	AudioAmplifier
Plate current	2.7 mA	AudioAmplifier
Screen current	0.6 mA	AudioAmplifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	420 μ S	45VPlate
Transconductance	720 μ S	90VPlate
Plate resistance	0.5 M Ω	90VPlate

1963 PHILIPS ELECTRON TUBES HANDBOOK V1

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak inverse voltage maximum	100 V	DetectorDiode
Average diode current maximum	0.2 mA	DetectorDiode
Peak diode current maximum	1.2 mA	DetectorDiode



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

1967 Mullard Receiving Tubes for Maintenance

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

1967 MULLARD RECEIVING TUBES FOR MAINTENANCE

Section 1 · Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate-to-Grid Capacitance	<0.4 pF	PublishedCapacitance
Input Capacitance	2 pF	PublishedCapacitance
Output Capacitance	2.8 pF	PublishedCapacitance
Diode-to-Pentode Capacitance	1.5 pF	PublishedCapacitance

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	90 V	PentodeSection;90VPoint
Screen Voltage	90 V	PentodeSection;90VPoint
Plate Current	2.7 mA	PentodeSection;90VPoint
Screen Current	0.63 mA	PentodeSection;90VPoint
Transconductance	720 uS	PentodeSection;90VPoint
Plate Resistance	500 kohm	PentodeSection;90VPoint
Screen-to-Control-Grid Mu	13.5	PentodeSection;90VPoint

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	90 V	PentodeSection
Plate Dissipation	0.25 W	PentodeSection
Screen Voltage	90 V	PentodeSection
Screen Dissipation	0.06 W	PentodeSection
Cathode Current	4.5 mA	PentodeSection

1967 MULLARD RECEIVING TUBES FOR MAINTENANCE

Section 2 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Inverse Voltage	100 V	DiodeSection
Average Diode Current	0.2 mA	DiodeSection
Peak Diode Current	1.2 mA	DiodeSection



SOURCE OPERATING CONDITIONS

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 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater or filament voltage	1.4 V	Published nominal value
Heater or filament current	50 mA	Published nominal value
Transconductance	625 μ S	Published operating characteristic

1968 MAZDA BELVU

Section 2 · Diode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater or filament voltage	1.4 V	Published nominal value

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater or filament current	50 mA	Published nominal value
Transconductance	625 μ S	Pentode section



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

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 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage amplification	75	Va=90V
Triode-connected voltage amplification	11	TriodeConnection

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