



ELECTRONIC TUBE REFERENCE

EAF42

Voltage Pentode or Tetrode (under 100V) electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

DIODE-PENTODE

Diode variable-mu pentode for RF, IF, and audio-frequency amplification together with signal detection. The pentode provides controlled gain for AVC while the diode supplies the associated detector function.

GENERAL CHARACTERISTICS

BASE DESIGNATION	NOVAL	BASE PINS	9
NOMINAL HEATER	6.3 V / 200 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Common cathode	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	1400000 Ω
TRANSCONDUCTANCE	0.002 S
AMPLIFICATION FACTOR	16
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	2 W
MAXIMUM SCREEN DISSIPATION	0.3 W
MAXIMUM CATHODE CURRENT	10 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	
MAXIMUM PLATE VOLTAGE	50 V
MAXIMUM CATHODE CURRENT	5 mA
PEAK INVERSE VOLTAGE	350 V
NOMINAL OUTPUT CURRENT	600 mA
PEAK FORWARD CURRENT	5 A
<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>	

Diode-pentode for detection and RF, IF or low-frequency amplification.



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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Supply Voltage	250 V	PentodeSection
Screen Voltage	85 V	PentodeSection
Plate Current	5 mA	PentodeSection
Screen Current	1.5 mA	PentodeSection

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	2000 μ S	PentodeSection
Plate Resistance	1.4 Mohm	PentodeSection
Grid Voltage for 100:1 Transconductance Reduction	-43 V	PentodeSection



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	85 V	RFIFAmplifier
Control-grid voltage	-2 V	RFIFAmplifier
Plate current	5 mA	RFIFAmplifier
Screen current	1.5 mA	RFIFAmplifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	2000 μ S	Section1
Plate resistance	1400000 Ω	Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate capacitance	5.2 pF	Section1
Grid capacitance	4.1 pF	Section1
Grid-to-plate capacitance maximum	0.002 pF	Section1

1963 PHILIPS ELECTRON TUBES HANDBOOK V1A

Section 2 · Diode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Diode capacitance	3.3 pF	Section2

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak inverse voltage maximum	350 V	DetectorDiode
Average diode current maximum	0.6 mA	DetectorDiode
Peak diode current maximum	5 mA	DetectorDiode



SOURCE DATA APPENDIX

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
I	5 mA	Published in approved EAF42.pdf target datasheet; Section2
I _g ,	1.5 mA	Published in approved EAF42.pdf target datasheet; Section2
I _k max	10 mA	Published in approved EAF42.pdf target datasheet; Section2
I _a d max	0.8 mA	Published in approved EAF42.pdf target datasheet; Section2

1967 MULLARD RECEIVING TUBES FOR MAINTENANCE

Section 2 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
I	5 mA	Published in approved EAF42.pdf target datasheet; Section1
I _g ,	1.5 mA	Published in approved EAF42.pdf target datasheet; Section1
I _k max	10 mA	Published in approved EAF42.pdf target datasheet; Section1
I _a d max	0.8 mA	Published in approved EAF42.pdf target datasheet; Section1



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

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	RF_IF_AF_Amplifier text	—

1968 MAZDA BELVU

Section 2 · Diode

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Detector text	—



SOURCE DATA APPENDIX

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	200 mA	—
Typical plate voltage	250 V	RFOrIF
Typical plate current	5 mA	RFOrIF
Typical screen current	1.6 mA	RFOrIF
Transconductance	2150 μ S	RFOrIF
Plate resistance	1.4 Mohm	RFOrIF

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate no-current voltage	550 V	—
Maximum plate voltage	300 V	—
Maximum plate dissipation	2 W	—
Maximum screen no-current voltage	550 V	—
Maximum screen dissipation	0.3 W	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	4.1 pF	—
Plate-grid capacitance maximum	0.002 pF	—
Diode-grid capacitance maximum	0.0015 pF	—

1999 PHILIPS E-Z

Section 2 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum diode inverse peak voltage	350 V	—
Maximum diode average current	0.8 mA	—
Maximum diode peak current	5 mA	—