

ELECTRONIC TUBE REFERENCE

UAF42

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

DIODE-PENTODE

Series-heater diode variable-mu pentode combining receiver detection with controlled RF, IF, or audio amplification. The pentode provides broad gain control while the diode supplies independent detection.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	8
NOMINAL HEATER	12.6 V / 100 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION1 Diode	
MAXIMUM PLATE VOLTAGE	200 V
MAXIMUM CATHODE CURRENT	0.8 mA
PEAK INVERSE VOLTAGE	350 V
PEAK FORWARD CURRENT	5 mA
MAXIMUM HEATER-CATHODE VOLTAGE	150 V
Published ratings and characteristics promoted from the approved source.	

SECTION2 Pentode	
PLATE RESISTANCE	900000 Ω
TRANSCONDUCTANCE	0.002 S
MAXIMUM PLATE VOLTAGE	170 V
MAXIMUM SCREEN VOLTAGE	85 V
MAXIMUM PLATE DISSIPATION	2 W
MAXIMUM SCREEN DISSIPATION	0.3 W
MAXIMUM CATHODE CURRENT	10 mA
<i>Published ratings and characteristics promoted from the approved source.</i>	

Detector diode and variable-mu pentode for radio-frequency or intermediate-frequency amplification. The supplied French datasheet was translated to English for descriptive output.



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 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pentode Plate Voltage	120 V	PentodeSection
Pentode Plate Current	3.8 mA	PentodeSection

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pentode Transconductance	1500 μ S	PentodeSection



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1953 La Radiotechnique

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

1953 LA RADIOTECHNIQUE

Section 1 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	12.6 V	Nominal
HeaterCurrentNominal	100 mA	Nominal
Maximum Plate Voltage	200 V	—

1953 LA RADIOTECHNIQUE

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	12.6 V	Nominal
HeaterCurrentNominal	100 mA	Nominal
Maximum Plate Voltage	170 V	—
Maximum Screen Voltage	85 V	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	2000 μ S	Typical
Amplification Factor	1800	Typical
Plate Resistance	900000 ohm	Typical



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1957 Philips Receiving and Amplifying Tubes

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

1957 PHILIPS RECEIVING AND AMPLIFYING TUBES

Section 2 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cutoff characteristic	Variable-mu	—

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	RF / IF / AF amplifier	—



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 · Diode

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

1963 PHILIPS ELECTRON TUBES HANDBOOK V1

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	170 V	RF/IF amplifier
Screen voltage	85 V	RF/IF amplifier
Plate current	5 mA	RF/IF amplifier
Screen current	1.5 mA	RF/IF amplifier
Maximum plate voltage	250 V	—
Maximum screen voltage	250 V	—
Maximum plate dissipation	2 W	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	2000 μ S	RF/IF amplifier
Plate resistance	0.9 Mohm	RF/IF amplifier



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 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Single diode R.F. pentode with	100 mA	Published in approved UAF42.pdf target datasheet; Section1
gm 1.7 20	2 mA	Published in approved UAF42.pdf target datasheet; Section1
Vga(la<	2.5 mA	Published in approved UAF42.pdf target datasheet; Section1
Vga (1. =	5 mA	Published in approved UAF42.pdf target datasheet; Section1
I k max	10 mA	Published in approved UAF42.pdf target datasheet; Section1
lad max	0.8 mA	Published in approved UAF42.pdf target datasheet; Section1

1967 MULLARD RECEIVING TUBES FOR MAINTENANCE

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Single diode R.F. pentode with	100 mA	Published in approved UAF42.pdf target datasheet; Section2
gm 1.7 20	2 mA	Published in approved UAF42.pdf target datasheet; Section2
Vga(la<	2.5 mA	Published in approved UAF42.pdf target datasheet; Section2
Vga (1. =	5 mA	Published in approved UAF42.pdf target datasheet; Section2
I k max	10 mA	Published in approved UAF42.pdf target datasheet; Section2
lad max	0.8 mA	Published in approved UAF42.pdf target datasheet; Section2

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tension filament	12.6 V	—
Courant filament	100 mA	—
Capacité grille n°1/ anode Cg/a	2 mpF	—
Capacité grille n° 1/filament s Cg,/f	0.05 pF	—
Capacité anode/ cathode filament Ca/ kf	3.3 pF	—
Capacité anode/filament c Ca/f	0.02 pF	—
Capacité anode Diode/ grille n° 1 CaD/ #	1.5 mpF	—
Capacité anode Diode/ anode Pentode CaD/aP	150 mpF	—
Tension d'anode à courant nul serereneens	550 V	—
Tension d'anode s .. V	250 V	—
Tension de grille n°2 à courant nul	550 V	—
Tension de grille no 2 pour Ia < 2,5 MA urercrscar- Ve,	250 V	—
pour Ia =5 mA	125 V	—
Dissipation de grille n°e2	0.3 W	—
Courant de cathode	10 mA	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Résistance du circuit de grille n° 1 cseuss	3 MΩ	—
Tension entre filament et cathode	150 V	—
Tension inverse de crête d'anode s Vaicr	350 V	—
Courant d'anode	0.8 mA	—
Courant de crête d'anode	5 mA	—
Tension entre filament et cathode s	150 V	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacité d'entrée ecerseeneosenenseennenn Ce	4.1 pF	—
Capacité de sortie Cs	5.2 pF	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tension d'alimentation VN - 100 170	200 V	—
Tension d'anode Va 100 170	200 V	—
Résistance de cathode Rk 310 310	310 Ω	—
Tension de grille n° 1 -1,2 -2	-2 V	—
Tension de grille n° 2 ... 50 85	85 V	—
Courant d'Anode s 2,8 5	5 mA	—
Pente 1,7 2	2 mA	—
Résistance interne ... 0,85 0,9	1 MΩ	—
Résistance équivalente de bruit RBeq 5,8 T,5	7.5 kΩ	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
de 1/ 100 de laà valeur nominale Ve, -16 -28	-34 V	—



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 2 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	4 pF	Pentode
Output capacitance	6.5 pF	Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode-grid capacitance	0.002 pF	Pentode
Typical transconductance	1800 μ S	RFIFAmplifier

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