



ELECTRONIC TUBE REFERENCE

EF97

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

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

PENTODE

Variable-mutual-conductance RF pentode for controlled RF/IF amplification and mixer service. Its gain-control characteristic is central to receiver operation, while mixer capability is secondary rather than a dedicated oscillator-converter function.

GENERAL CHARACTERISTICS

BASE DESIGNATION	MINIATURE	BASE PINS	9
NOMINAL HEATER	6.3 V / 200 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Pentode	
PLATE RESISTANCE	60000 Ω
TRANSCONDUCTANCE	0.0019 S
MAXIMUM PLATE VOLTAGE	50 V
MAXIMUM SCREEN VOLTAGE	50 V
MAXIMUM PLATE DISSIPATION	2.5 W
MAXIMUM SCREEN DISSIPATION	0.2 W
MAXIMUM CATHODE CURRENT	6 mA
<i>Published ratings/characteristics promoted from the approved source.</i>	

Variable-mutual-conductance RF pentode for RF/IF amplifier and mixer service.



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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	6.3 V	Nominal
HeaterCurrentNominal	300 mA	Nominal
Maximum Plate Voltage	250 V	—
Maximum Screen Voltage	250 V	—
Maximum Plate Dissipation	2.5 W	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	5000 μ S	Typical



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1958 Mullard Receiving Tubes

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

1958 MULLARD RECEIVING TUBES

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	500 μ S	V _a =6.3V
Plate resistance	200 k Ω m	V _a =6.3V
Transconductance	1100 μ S	V _a =12.6V
Plate resistance	200 k Ω m	V _a =12.6V

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	2100 μ S	Va=25V
Plate resistance	50 kOhm	Va=25V

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Mixer conversion conductance	655 μ S	RFMixer; Vb=25V


SOURCE DATA APPENDIX

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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published heater rating
Heater current	200 mA	Published heater rating
Transconductance	1900 μ S	RForIFAmplifier
Plate resistance	60000 ohm	RForIFAmplifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	25 V	RForIFAmplifier
Screen voltage	6.3 V	RForIFAmplifier
Grid bias	-0.85 V	RForIFAmplifier
Plate current	2.7 mA	RForIFAmplifier
Screen current	0.8 mA	RForIFAmplifier


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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Heating
Heater current	300 mA	Heating
Maximum plate voltage	50 V	Promoted published datasheet value
Maximum screen voltage	50 V	Promoted published datasheet value

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	60000 Ω	Promoted published datasheet value
Transconductance	1900 μS	Promoted published datasheet value
Chauffage: indirect. Alimentation sé- $V_e =$	6.3 V	Published datasheet value
Heizung : indirekt. Serien- oder Pa- $I_f =$	300 ma	Published datasheet value
Heater voltage $\%f =$	6.3 V	Published datasheet value
Heater current $I_r =$	300 mA	Published datasheet value
except anode $C_{gy} =$	6.2 pF	Published datasheet value
except grid No.1 $C_g =$	3.8 pF	Published datasheet value
Anode to grid No.1 $C_{agy} =$	0.015 pF	Published datasheet value
Anode voltage $V_a = 25 \ 12,6$	6.3 V	Published datasheet value
Grid No.2 voltage $V_{g2} = 6.3 \ 6,3$	3.2 V	Published datasheet value
Grid No.1 voltage $V_{81} = -0,85 \ -0.85$	-0.85 V	Published datasheet value
Anode current $I_g = 2.7 \ 2.5$	0.8 mA	Published datasheet value
Grid No.2 current $I_{go} = 0.8 \ 0.9$	0.3 mA	Published datasheet value
Mutual conductance $S = 1.9 \ 1.8$	0.9 mA/V	Published datasheet value

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Equivalent noise resistance $R_{gq} = 5 \text{ } 5.5$	8 kΩ	Published datasheet value
Grid No.1 voltage $V_{g1} = -3.3$ ~ 3.3	2.6 V	Published datasheet value

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
$C_a = i$	4 pF	Capacitances
$C_{ag1} =$	0.015 pF	Capacitances
$C_{gig2} =$	3 pF	Capacitances

TUBE TINKER

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and their source documents.

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