



ELECTRONIC TUBE REFERENCE

EF91

Voltage Pentode - Sharp Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

PENTODE

Miniature sharp-cutoff RF pentode with high mutual conductance. Mullard and Philips documentation identify it for fixed-gain high-frequency amplification requiring substantial transconductance from a compact tube.

GENERAL CHARACTERISTICS

BASE DESIGNATION	B7G	BASE PINS	7
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Pentode	
PLATE RESISTANCE	500000 Ω
TRANSCONDUCTANCE	0.0076 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	2.5 W
MAXIMUM SCREEN DISSIPATION	0.65 W
MAXIMUM CATHODE CURRENT	15 mA
<i>Published maximum ratings, characteristics and operating conditions reviewed.</i>	

Miniature sharp-cutoff RF pentode with high mutual conductance. Published heater, characteristics, ratings and application information were read from the supplied Mullard sheet.



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
Cutoff characteristic	Sharp cutoff	—

APPLICATION

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	HF amplification	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Mullard

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

1963 MULLARD

Section 1 · Pentode

CAPACITANCE

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	7 pF	—
Output capacitance	2 pF	—

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode current	10 mA	V _a =250V; V _{g2} =250V
Screen current	2.55 mA	V _a =250V; V _{g2} =250V

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Equivalent noise resistance	1200 ohm	—
Input damping	5000 ohm	40 Mc/s


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	300 mA	Published heater rating
Transconductance	7600 μ S	RForIFAmplifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	RForIFAmplifier
Screen voltage	250 V	RForIFAmplifier
Plate current	10 mA	RForIFAmplifier


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

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Ci n 7.1	7.1 pF	Published in approved EF91 target datasheet entry; Section1
Cou t 2.1	3.1 pF	Published in approved EF91 target datasheet entry; Section1

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
P g 2 max	650 mW	Published in approved EF91 target datasheet entry; Section1
II< max	15 mA	Published in approved EF91 target datasheet entry; Section1



TUBE TINKER
ELECTRON TUBE DATABASE

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Heating
Heater current	300 mA	Heating
Maximum plate voltage	300 V	Promoted published datasheet value
Maximum screen voltage	300 V	Promoted published datasheet value
Maximum plate dissipation	2.5 W	Promoted published datasheet value

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacitances {with external screening) Cg1 =	7.3 pF	Capacitances

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
$v_{ds} =$	250 V	Published datasheet value
$V_{g2} =$	25 V	Published datasheet value
$V_{g1} = \sim$	2 V	Published datasheet value
$I_{g2} =$	2.55 mA	Published datasheet value
Published electrical value	7.65 mA/V	Published datasheet value