



ELECTRONIC TUBE REFERENCE

EL42

Power - Pentode Single (NOT beam) (under 10W) electronic tube

CONSOLIDATED TECHNICAL
DATA

1 SECTION
CONSTRUCTION
PENTODE

Low-heater-current output pentode designed particularly for automobile-radio audio stages.

GENERAL CHARACTERISTICS

BASE DESIGNATION	B8A	BASE PINS	8
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	90000 Ω
TRANSCONDUCTANCE	0.0032 S
AMPLIFICATION FACTOR	288
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	6 W
MAXIMUM SCREEN DISSIPATION	3.3 W
<i>Published ratings/characteristics promoted from the approved source.</i>	

OUTPUT PENTODE Output pentode with an anode dissipation of 6W, suitable for use in car radio receivers. The limiting values, characteristics and audio performance of the EL42 and EL85 are identical. The basing and dimensions of the EL42 are shown below. (~) I ~



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

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Service	Audio power output	—



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	200 mA	Nominal
Maximum Plate Voltage	300 V	—
Maximum Screen Voltage	300 V	—
Maximum Plate Dissipation	6 W	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	3200 μ S	Typical
Amplification Factor	288	Typical

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	90000 ohm	Typical



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	700 mA	Published heater rating
Transconductance	3200 μ S	ClassA
Plate resistance	90000 ohm	ClassA

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	225 V	ClassA
Screen voltage	225 V	ClassA
Plate current	26 mA	ClassA
Screen current	4.1 mA	ClassA
Load resistance	9000 ohm	ClassA
Push-pull power output	7 W	ClassAB PushPull TwoTubes



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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Output pentode roted for	6	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.
up (	120 a	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.
gm	3.1 mA	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.
ra	100	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Va	250 V	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.
EL85 Output pentode rated for	6 W	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.
up to	120 a	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.
Vg•	250 V	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.
Va	300 V	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.
Vg •	175 V	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.
Vg,	30 V	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.
Vg J	-60 V	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.
Vg1	-100 V	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Output pentode rated for	6 W	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.
VaIn) max	550 V	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.
Va max	300 V	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.
Vg	550 V	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.
Vg	300 V	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.
Vg	100 V	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.
Vg1 ma x . (lg1 = +	1.3 ma	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.
EL8S Output pentode rated for	6	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.
up to	120 a	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.
I.V o " Vg	250 V	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.
2.Vo = Vg 2 = 200V	200	Published EL85 value; supplied EL42 sheet states electrical characteristics are identical.



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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Chauffage: indirect par C.C. Ve	6.3 V	—
Wo = 2,1	2.8 W	—
Vi{Wo	50 mW	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
$W_o = 0 \ 0,05 \ 4,1 \ 0 \ 0,05$	7 W	—
$I_{gz} = 2 \times 0,8 - 2 \times 4,6 \ 2 \times 0,8$	$\sim 2 \times 6.5 \text{ mA}$	—
$W_o = 0 \ QoS5 \ 4 \ 0 \ 005$	6.5 W	—
$v_a \ 9$	200 V	—
PHILIPS	6 W	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacités c	6.2 pF	—
C_{gl}	$< 0.2 \text{ pF}$	—
C_{glf}	$< 0.2 \text{ PF}$	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
$V_a = 200$	225 V	ClassA
$V_{g2} = 200$	225 V	ClassA
$I_a = 22,5$	26 mA	ClassA
$I_{g2} = 3,5$	4.1 mA	ClassA
$s = 3,2$	3.2 mA/V	ClassA
$V_a = 200$	250 v	ClassA
$V_{gz} = 200$	250 v	ClassA
$1a = 2 \times 16 - 2 \times 17 \ 2 \times 20$	$2 \times 21.5 \text{ mA}$	ClassA
$I_{gp} = 2 \times 2,6 - 2 \times 5,6 \ 2 \times 3,2$	$2 \times 6.7 \text{ mA}$	ClassA
$v, = 200$	250 v	ClassB
$V_{a2} \ 200$	250 v	ClassB
$V_{g1} = =17$	-22.5 v	ClassB
$I_a = 2 \times 5 - 2 \times 16 \ 2 \times 5$	$2 \times 20 \text{ mA}$	ClassB
Grenzdaten $V_{ao} = \max$	550 V	—
$V_a = \max.,$	300 V	—
$V_{g00} = \max$	550 V	—
$V_{g?} = \max$	300 V	—
$W_{g2}(V_{3i}=0) = \max$	1 W	—
$W_{gg}(w_{ozmax.}) = \max$	2 W	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
$I_x = \max$	35 mA	—
$V_{g1}(I_{g1}=+0, [1])$	3 μ A	—
$V_{g1}(I_{g1}=+0, [2])$	-1.3 V	—

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