



ELECTRONIC TUBE REFERENCE

KL5

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

CONSOLIDATED TECHNICAL
DATA

1 SECTION
CONSTRUCTION
PENTODE

Directly heated output pentode designed specifically for low-drain 2 V battery receivers.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	2 V / 100 mA	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	180000 Ω
TRANSCONDUCTANCE	0.0014 S
MAXIMUM PLATE VOLTAGE	200 V
MAXIMUM SCREEN VOLTAGE	200 V
MAXIMUM PLATE DISSIPATION	2 W
MAXIMUM SCREEN DISSIPATION	1 W
MAXIMUM CATHODE CURRENT	12 mA
Directly heated output pentode for 2 V battery receivers	

Directly heated output pentode for 2 V battery receivers. The supplied Philips datasheet provides operating characteristics, limiting values, capacitances, and application information; non-English material is represented in English in the descriptive output.

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
This is a directly-heated output valve for	2 V	PentodeConnection
sumption; with [1]	135 V	PentodeConnection
sumption; with [2]	8.5 mA	PentodeConnection
the output is	0.52 W	PentodeConnection
circuits is another important feature; with an anode potential of Dimensions in mm. [1]	135 V	PushPull
circuits is another important feature; with an anode potential of Dimensions in mm. [2]	1 W	PushPull
7%, distortion, the combined filament current being only	200 mA	PushPull
Filament voltage. . . rP	20 V	PushPull;PentodeConnection
Filament current. e e e e s oo I =00	0 mA	PushPull;PentodeConnection
15 -10 -5 (L7 grid bias, with $V_e = V_g = 135$ and	90 V	—
Anode voltage $V(t = 90 V_v$	135 V	—
Screen-grid voltage V_o [1]	90 V	—
Screen-grid voltage V_o [2]	135 V	—
Grid bias. $g = -$ [1]	4 V	—
Grid bias. $g = -$ [2]	6.5 V	—
Anode current [1]	4.8 mA	—
Anode current [2]	8.5 mA	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen-grid current [1]	0.9 mA	—
Screen-grid current [2]	1.5 mA	—
Mutual conductance [1]	1.4 mA/V	—
Mutual conductance [2]	1.7 mA/V	—
Output power (100% modulation) w [1]	0.2 W	—
Output power (100% modulation) w [2]	0.53 W	—
Anode voltage V_a [1]	90 V	—
Anode voltage V_a [2]	135 V	—
Screen-grid voltage V_{g2}	90 V	—
Grid bias. $V_{g1} = -V_i$	8.5 V	—
Anode current (without signal). $I_a = 2$ [1]	1 mA	—
Anode current (without signal). $I_a = 2$ [2]	2 mA	—
Anode current at max. modulation . $I_{a_{max}}$ [1]	2 X 3.6 mA	—
Anode current at max. modulation . $I_{a_{max}}$ [2]	6.25 mA	—
Screen-grid current (without signal). I_{g2} [1]	2 X 0.1 mA	—
Screen-grid current (without signal). I_{g2} [2]	0.35 mA	—
Screen-grid current at max. modulation $I_{g2_{max}}$ [1]	2 X 1.0 mA	—
Screen-grid current at max. modulation $I_{g2_{max}}$ [2]	2 X 24 mA	—
Output power . modulation P_o [1]	3.5 W	—
Output power . modulation P_o [2]	1.05 W	—
Screen-grid dissipation (17, = max.) $P_{g2} = max$	1 W	—
Cathode current . . $I_c = max$	12 mA	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid voltage at grid (urrent start (JJ1 = -+0 3'1tA) Vpo = max. —	2 V	—
F b, 1 L ~	1 V	—
o] o ! Vo	155 V	—
= v	7 s	—
S A	-5 V	—
10 4 e	6 V	—
¥y EERES]	7 W	—
grid bias as paramecter, for a HHE L	13 V	—
screen voltage of	185 V	—
L]	-2 V	—
A S	3 V	—
00 ;501 I\[\w\\'aa It ""01 In [200 "V(V[j ~50 screen voltage of	90 V	—
output power (Fa = Vg, = -	185 V	—
vi [1]	3 s	—
vi [2]	-2 V	—
current (Ve = Vg	135 V	—
Yyt= ~	4 V	—
0 1 1 1L (1)	0 V	—
1 VauW2n	90 V	—
T [T Ur	-85 V	—
output circuit without grid	7 s	ClassB
current. Va = Vg	90 V	ClassB

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
/'	7 V	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode voltage Ve = max	200 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode dissipation . $W_y = \max$	2 W	—
Sereen-grid voltage . $V_{ge} = \max$	200 V	—
Nereen-grid dissipation (F; $-oV$). $W_{ge} = \max$	0.5 W	—