



ELECTRONIC TUBE REFERENCE

CL4

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

CONSOLIDATED TECHNICAL
DATA

1 SECTION
CONSTRUCTION
PENTODE

High-sensitivity output pentode for transformerless AC/DC radio equipment, delivering approximately 4 W.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	8
NOMINAL HEATER	28 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	25000 Ω
TRANSCONDUCTANCE	0.008 S
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	9 W
MAXIMUM SCREEN DISSIPATION	1.5 W
MAXIMUM CATHODE CURRENT	70 mA
<i>Published ratings and characteristics promoted from the approved source.</i>	

Power output pentode with 200 V typical operating conditions, 8 mA/V transconductance, 4 W output and ratings for AC/DC receiver service.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1938 Philips Miniwatt Vacuum Tube Catalog

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

1938 PHILIPS MINIWATT VACUUM TUBE CATALOG

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	200 V	ClassA
Plate current	45 mA	ClassA
Screen voltage	200 V	ClassA
Screen current	6 mA	ClassA
Grid bias	-8.5 V	ClassA
Optimum load resistance	4500 ohm	ClassA
Power output	4 W	ClassA
Distortion	5 %	AtRatedOutput
Grid AC voltage	9 V RMS	AtRatedOutput

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	8 mA/V	ClassA
Internal resistance	35000 ohm	ClassA



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1953 RFT Rundfunk Technik

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

1953 RFT RUNDFUNK TECHNIK

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode voltage	200 V	—
Screen-grid voltage	200 V	—
Cathode resistance	170 Ω	—
Anode current	45 mA	—
Screen-grid current	6 mA	—
Load resistance	4.5 kΩ	—
Audio output power	4 W	—
Distortion at rated output	10 %	—
Cold anode voltage maximum	400 V	—
Cold screen-grid voltage maximum	400 V	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

1963 Mullard

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

SOURCE PDF

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode voltage	200 V	—
Screen voltage	200 V	—
Control-grid voltage	-8.5 V	—
Anode current	45 mA	—
Screen current	6 mA	—
Load resistance	4500 ohm	—
Output power	4 W	—
Total distortion	10 %	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode resistor	167 ohm	—
Anode supply voltage maximum	400 V	—
Plate voltage maximum	250 V	—
Plate dissipation maximum	9 W	—
Cathode current maximum	70 mA	—
Screen supply voltage maximum	400 V	—
Screen voltage maximum	250 V	—
Screen dissipation maximum	2 W	—
Heater-cathode voltage maximum	175 V	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	8000 uS	—
Plate resistance	35000 ohm	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1999 Philips 0-D

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

1999 PHILIPS 0-D

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
a Die Rohre CL	9	Published datasheet specification
K Heizleistung erforderlich. Bei	0 mA	Published datasheet specification
beträgt die Heizspannung deswegen	3 V	Published datasheet specification
; bei	5	Published datasheet specification
Gitterwechselspannungsbedarf pro Gitter ist	2.5 V	Published datasheet specification

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heizspannung . e Vi	33 V	Published datasheet specification
Heizstrom. I –	200 A	Published datasheet specification
Anodenspannung . . Va	200 V	Published datasheet specification
Schirmgitterspannung . V2	200 V	Published datasheet specification
Kathodenwiderstand . Ry,	170	Published datasheet specification
Neg. Gittervorspannung. . . Ve	8.5 V	Published datasheet specification
Anodenstrom I	45 mA	Published datasheet specification
Schirmgitterstrom N	6 mA	Published datasheet specification
Steilheit im Arbeitspunkt e .S	8 mA	Published datasheet specification
Innerer Widerstand im Arbeitspunkt R;	35000	Published datasheet specification
Günstigster Anpassungswiderstand. R,	4500	Published datasheet specification
Ausgangsleistung bet 10 %/, Verzerrung . W,	4 W	Published datasheet specification
Gitterwechselspannung bei 4 W . Vi	5 V	Published datasheet specification
Empfindlichkeit e Viisomw)	0.5 V	Published datasheet specification
Schirmgitterspannung . e	200 V	Published datasheet specification
Kathodenwiderstand Rji	135	Published datasheet specification
Anodenruhestrom Tao	2	Published datasheet specification
Anodenstrom bei voller Au@steuerung Ta max	2	Published datasheet specification
Schirmgitterruhestrom glomax	2	Published datasheet specification
Schirmfilterstrom bei voller Aussteuerung	2 ma	Published datasheet specification
Vao	350 V	Published datasheet specification
Ve2o	550 V	Published datasheet specification
Ve2	250 V	Published datasheet specification
Wea	2 W	Published datasheet specification
Vgt (Igt	0.3	Published datasheet specification

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
g1k	1	Published datasheet specification
negativen Gitterspannung bei V_a	200 V	Published datasheet specification
Tone ist aber ein kleiner Elektrolytkondensator von	5	Published datasheet specification
l_{Vgr}	0 V	Published datasheet specification
Anodenstrom als Funktion der $\phi_f +$	4 V	Published datasheet specification
Anodenspannung bei V_g ,	207 V	Published datasheet specification
Published specification	1	Published datasheet specification
$f 5 L_l L_{lao}$	2	Published datasheet specification
64 g] [Hm	135	Published datasheet specification
$+ j' R_l 11T Re$	45000 S	Published datasheet specification

TUBE TINKER

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