



ELECTRONIC TUBE REFERENCE

YD1130

Power - Triode electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Directly heated thoriated-tungsten RF power triode for transmitting, industrial, and Class B applications. Rated for approximately 400 W plate dissipation, with high amplification factor suited to efficient RF power stages.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	5 V / 14.1 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
TRANSCONDUCTANCE	0.011 S
AMPLIFICATION FACTOR	350
MAXIMUM PLATE DISSIPATION	400 W
Published electrical data additionally captured in parameter rows.	

Directly heated thoriated-tungsten R.F. power triode. The Philips sheet publishes filament data, interelectrode capacitances, static characteristics, limiting ratings, and operating conditions for R.F. and/or Class B service.

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 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament voltage V_f'	5 V	Filament voltage $V_f' = 5.0$ V
Filament current I_f	14.1 A	Filament current $I_f = 14.1$ A
Anode voltage V_g	5 kV	Anode voltage $V_g 7.5$ kV.
Anode current	80 mA	Anode current $I_a = 80$ mA
Mutual conductance S	11 mA	Mutual conductance $S = 11$ mA/V
Amplification factor n	350	Amplification factor $n = 350$
Frequency f upto	110 MHz	Frequency f upto 110 MHz
Frequency f	30 MHz	Frequency f 30 MHz
Anode voltage v_V ,	2500 A	Anode voltage v_V , 2500 A
Peak cathode driving voltage V_k	91	Peak cathode driving voltage $V_k 0.91$ V
Anode current I_a "	270 mA	Anode current I_a " 270 mA
Grid current I_g -	80 mA	Grid current I_g - 80 mA
Driver output power W_{ar} -	35	Driver output power W_{ar} - 35 (PEP) W
Anode input power $W_{i a}$	675 W	Anode input power $W_{i a}$ 180 1000 675 W
Anode dissipation W_a ,	368 W	Anode dissipation W_a , 180 385 368 W
Output power W_o ,	2	Output power W_o , 0.640 (PEP) 2 W
Output power in load W_{icad}	3	Output power in load W_{icad} 0.580 (PEP) 3 W
Overall efficiency n -	43	Overall efficiency n - 58 43 %
3) Measured in a circuit having an efficiency of	91	3) Measured in a circuit having an efficiency of 91 %
Anode voltage V_a ,	3000 v	Anode voltage V_a , = 3000 v
Load resistance R_{aa}	9500 Q	Load resistance R_{aa} .. 9500 Q

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak grid driving voltage Vg _{gp}	176	Peak grid driving voltage Vg _{gp} = 0 176 vV
Anode current L	333 mA	Anode current L = 2x90 2x333 mA
Grid current I _g	120 mA	Grid current I _g = 0 2x120 mA
Anode input power W _{ia}	1000 W	Anode input power W _{ia} = 2x270 2x1000 W
Anode dissipation w _a	345 W	Anode dissipation w _a = 2x270 2x345 W
Output power W _a	1310 W	Output power W _a = 0 1310 W
Efficiency η = -	65	Efficiency η = - 65 %

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode voltage V _a = max	3000 V	Anode voltage V _a = max. 3000 V
Anode input power W _i = max.1200 W	1200 W	Anode input power W _i = max.1200 W
Anode dissipation W _a = max	400 W	Anode dissipation W _a = max. 400 W
Anode current ' I = max	400 mA	Anode current ' I = max. 400 mA
Grid dissipation W _g . = max	20 W	Grid dissipation W _g . = max. 20 W
Anode input power W _{ia} max	1200 W	Anode input power W _{ia} max. 1200 W
Anode current I _a = max	400 mA	Anode current I _a = max. 400 mA
Grid dissipation W _g = max	20 W	Grid dissipation W _g = max. 20 W

TUBE TINKER

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