



ELECTRONIC TUBE REFERENCE

TB41250

Power - Triode (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TRIODE

Directly heated Philips transmitting triode suitable for grounded-grid RF power operation. Rated for approximately 450 W plate dissipation and 4 kV plate voltage, with moderate gain and substantial transmitting power capability.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	10 V / 9.9 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
TRANSCONDUCTANCE	0.0045 S
AMPLIFICATION FACTOR	28
MAXIMUM PLATE VOLTAGE	4000 V
MAXIMUM PLATE DISSIPATION	450 W
<i>Published filament, capacitance, typical characteristics, limiting values and RF/AF operating tables reviewed.</i>	

TB41250 is a Philips grounded-grid-capable transmitting triode. The supplied datasheet provides direct-filament data, RF/AF ratings, capacitances and high-power operating conditions.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Philips Electron Tubes Handbook V4

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

1963 PHILIPS ELECTRON TUBES HANDBOOK V4

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament voltage	10 V	DirectlyHeated
Filament current	9.9 A	DirectlyHeated
Amplification factor	28	Published
Transconductance	4500 μ S	Published

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate capacitance	0.17 pF	Published
Grid capacitance	8 pF	Published
Grid-to-plate capacitance	7 pF	Published



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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament voltage \ 10 Vv	10 a	Filament voltage \ 10 Vv

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament current I	99 a	Filament current I = 99 A
Anode to all other elements except grid C,	170 mA	Anode to all other elements except grid C, = 0.17 pF
Grid to all other elements except anode Cg	8 a	Grid to all other elements except anode Cg = 8.0 pF
Anode to grid Cag	7 A	Anode to grid Cag = 7.0 pF
50 Mc/s, it will be necessary to direct a low-velocity air flow on the anode seal	50 s	50 Mc/s, it will be necessary to direct a low-velocity air flow on the anode seal
RF power triode JL TB4/1250	1250 w	RF power triode JL TB4/1250
Wavelength b	3 W	Wavelength b = 3 3 3 3
Anode voltage vV,	2500 A	Anode voltage vV, = 4000 3500 3000 2500
Grid voltage Vg	-200 v	Grid voltage Vg = -350 =300 ~250 -200
Anode current I	535 A	Anode current I = 535 535 535 535 mA
Grid current Ig	115 mA	Grid current Ig = 115 115 115 115 mA
Grid input power Wig	42 w	Grid input power Wig = 60 54 48 42
Anode input power Wia	1340 A	Anode input power Wia = 2140 1880 1600 1340
Anode dissipation W,	390 A	Anode dissipation W, = 450 450 425 390
Wavelength A	3 W	Wavelength A = 3 3 3
Anode voltage Vg	2500 A	Anode voltage Vg = 4000 3500 3000 2500
Grid resistor Rg	1800 s	Grid resistor Rg = 3000 2600 2200 1800
Anode current I,	535 A	Anode current I, = 535 535 535 535
Anode dissipation Wy	390 A	Anode dissipation Wy = 450 450 425 390
Fig. 2 Grounded grid configuration	2 nf	Fig. 2 Grounded grid configuration.
Wavelength A	3 W	Wavelength A = 3 3 3 3
Anode voltage V,	2500 A	Anode voltage V, = 4000 3500 3000 2500
Grid voltage Vg	-200 v	Grid voltage Vg = =350 -300 -250 -200
Anode current I,	35 A	Anode current I, = 2x535 2x535 2x535 2x535 mA
Grid current Ig	15 mA	Grid current Ig = 2x115 2x115 2x115 2x115 mA
Grid input power Wig	12 w	Grid input power Wig = 2x320 2x274 2x248 2x212

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode input power Wia	340 A	Anode input power Wia = 2x2140 2x1880 2x1600 2x1340
Anode dissipation W,	90 A	Anode dissipation W, = 2x450 2x450 2x425 2x390
RF power triode J L TB“/‘25°	25 w	RF power triode J L TB“/‘25°
Frequency f upto 100 MHz	100 MHz	Frequency f upto 100 MHz
Wavelength A	3 W	Wavelength A = 3 m
Anode voltage Va	3000 A	Anode voltage Va = 3000 \%
Grid voltage Vg	-375 v	Grid voltage Vg = ~-375 v
Anode current I,	450 A	Anode current I, = 450 mA
Grid current Ig	85 mA	Grid current Ig = 85 mA
Grid input power wig	42 w	Grid input power wig = 42 w
Anode input power Wia	1350 A	Anode input power Wia = 1350 w
Anode dissipation W,	300 A	Anode dissipation W, = 300 w
Modulation power Wmod	675 a	Modulation power Wmod = 675 W

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification factor u	28 A	Amplification factor u = 28
Temperature of anode seal max. 220 el	220 a	Temperature of anode seal max. 220 el
Temperature of bottom pin seals max. 180 °c	180 a	Temperature of bottom pin seals max. 180 °c
Bulb temperature max. 250 °¢	250 a	Bulb temperature max. 250 °¢
Anode connector: 40626 max 118	118 A	Anode connector: 40626 max 118
Anode voltage	4000 A	Anode voltage = max. 4000
Anode dissipation	450 A	Anode dissipation = max. 450
Grid dissipation	50 s	Grid dissipation = max. 50
Cathode current	650 a	Cathode current = max. 650
Peak grid AC voltage Vgp	405 a	Peak grid AC voltage Vgp = 580 520 460 405 \Y
Output power Wy,	950 w	Output power Wy, = 1690 1430 1175 950
Efficiency n	71 %	Efficiency n = 79 76 73.5 71 %
Peak grid AC voltage Vgp	405 a	Peak grid AC voltage Vgp = 580 520 460 405
Output power W,	908 w	Output power W, = 1630 1376 1127 908

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak grid voltage Vgp	405 a	Peak grid voltage Vgp = 580 520 460 405
Output power Wy	340 w	Output power Wy = 3380+520 2860+440 2350+400 1900+340
Efficiency 7	71 %	Efficiency 7 = 79 76 73.5 71 %2)
Anode voltage 7 Va	3000 A	Anode voltage 7 Va = max. 3000 V
Anode dissipation W,	300 A	Anode dissipation W, = max. 300 W
Grid dissipation Wg	50 s	Grid dissipation Wg = max. 50 w
Grid current Ig	115 ma	Grid current Ig = max. 115 mA
Cathode current Iy	550 a	Cathode current Iy = max. 550 mA
Peak grid AC voltage Vgp	580 a	Peak grid AC voltage Vgp = 580 \%
Output power Wo	1050 w	Output power Wo = 1050 w
Efficiency n	78 %	Efficiency n = 78 %
Anode voltage V,	4000 A	Anode voltage V, = max. 4000
Anode dissipation W,	450 A	Anode dissipation W, = max. 450
Grid dissipation Wg	50 s	Grid dissipation Wg = max. 50
Cathode current I,	700 a	Cathode current I, = max. 700 mA
Peak cathode current Ikp	5 a	Peak cathode current Ikp = max. 5

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