



ELECTRONIC TUBE REFERENCE

QE0650

Power - Beam (NOT sweep) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

BEAMPOWER

Beam-power tetrode designed for audio and RF amplification, oscillator, and modulator service in transmitting equipment.

GENERAL CHARACTERISTICS

BASE DESIGNATION	MEDIUM 5P	BASE PINS	5
NOMINAL HEATER	6.3 V / 900 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Beam Power	
TRANSCONDUCTANCE	0.006 S
AMPLIFICATION FACTOR	8
MAXIMUM PLATE VOLTAGE	600 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	25 W
MAXIMUM SCREEN DISSIPATION	3.5 W
MAXIMUM CATHODE CURRENT	100 mA
Beam-power tetrode for AF/RF amplifier, oscillator and modulator service.	

Beam-power tetrode for AF/RF amplifier, oscillator and modulator service.

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 · Beam Power

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heizung : indirekt If	900 mA	Heizung : indirekt If = 0.9 A

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacitances Ca	7 pF	Capacitances Capacitances Ca = 7 pF
Kapazitäten	12 pF	Capacitances Kapazitäten 12 pF
Grid-to-plate capacitance	0.2 pF	Capacitances Cag1 < 0.2 pF1)

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current	72 mA	Typical characteristics Caracteristiques types S (Ia = 72 mA = 6 mA/V
Plate current	6 mA/V	Typical characteristics Caracteristiques types S (Ia = 72 mA = 6 mA/V
through a series resistor of	325 V	Class C telegraphy through a series resistor of 12.5 ks at Va = 325 V
Published electrical value	400 V	Class C telegraphy 25 kC at Va = 400 V
Published electrical value	475 V	Class C telegraphy 28 kC at Va = 475 V
Published electrical value	600 V	Class C telegraphy 37.5 kC at Va = 600 V
Plate voltage	325 V	Class C telegraphy Va = 325 V
Published electrical value	400 V	Class C telegraphy 25 kC a Va = 400 V
Published electrical value	0 a	Class C telegraphy 28k0 a
Plate voltage	475 V	Class C telegraphy Va = 475 V
Plate voltage	600 V	Class C telegraphy Va = 600 V

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
standes von	325 V	Class C telegraphy standes von 12.5 kC bei Va = 325 V
Published electrical value	400 V	Class C telegraphy 25 kC bei Va = 400 V
Published electrical value	475 V	Class C telegraphy 28 kC bei Va = 475 V
Published electrical value	600 V	Class C telegraphy 37.5 kC bei Va = 600 V
Plate voltage	600 V	Maximum ratings Va = max. 600 V
Wia = max	60 W	Maximum ratings Wia = max. 60 W
Wa = max	25 W	Maximum ratings Wa = max. 25W Va = max. 480 V
Wa = max	480 V	Maximum ratings Wa = max. 25W Va = max. 480 V
la = max	100 mA	Maximum ratings la = max. 100 mA Wia = max. 48W
la = max	48 W	Maximum ratings la = max. 100 mA Wia = max. 48W
Screen-grid voltage	300 V	Maximum ratings Vg2 = max. 300 V
Wg	3.5 W	Maximum ratings Wg2 = max. 3.5 W
vg	200 V	Maximum ratings -vg 1 = max. 200 V
Plate voltage	330 V	Maximum ratings Va = max. 330V
Control-grid current	5 mA	Maximum ratings Ig 1 = max. 5 mA
W	1 a	Maximum ratings W1a = max. 33W
W	33 W	Maximum ratings W1a = max. 33W
Vkf = max	135 V	Maximum ratings Vkf = max. 135 V
Va	400 V	Maximum ratings Va 600 500 400 V
Control-grid voltage	-45 V	Maximum ratings Vg1 = -45 -45 -45V
Vg	250 V	Maximum ratings Vg2 250 250 250 V
Plate current	100 mA	Maximum ratings Ia = 100 100 100 mA
Control-grid current	4 mA	Maximum ratings Ig1 = 4 4 4 mA
Published electrical value	8 mA	Maximum ratings 182 = 8 8 8 mA
Vg	65 v	Maximum ratings Vg1 p = 65 65 65v
W	0.3 W	Maximum ratings W181 0.3 0.3 0.3 W
Wia	40 W	Maximum ratings Wia = 60 50 40W
wa	15 w	Maximum ratings wa = 20 18 15w
Plate voltage	750 V	Maximum ratings Va = max. 750 V

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Wia = max•	75 W	Maximum ratings Wia = max• 75W P -= - -8Q j1Q10.
Wa = max	30 W	Maximum ratings Wa = max. 30W Va =max. 600v
Wa = max	600 v	Maximum ratings Wa = max. 30W Va =max. 600v
Plate current	100 mA	Maximum ratings Ia = max. 100 mA Wia = max. 60W
Plate current	60 W	Maximum ratings Ia = max. 100 mA Wia = max. 60W
Wg	3.5 W	Maximum ratings Wg2 = flax. 3.5 W
Control-grid voltage	200 V	Maximum ratings -Vg1 = max. 200 V - max._ i25 Q/B
Control-grid current	5 mA	Maximum ratings Ig1 = max. 5 mA Va = max. 415 11
V	135 V	Maximum ratings V1~ = max. 135 V Wia = max• 41.5 W
V	41.5 W	Maximum ratings V1~ = max. 135 V Wia = max• 41.5 W
Control-grid voltage	-45 V	Maximum ratings Vg1 = -45V
Plate current	100 mA	Maximum ratings Ia = 100 mA
Control-grid current	4 mA	Maximum ratings Ig1 = 4 mA
Screen-grid current	8 mA	Maximum ratings Ig2 = 8 mA
Wig	0.3 W	Maximum ratings Wig1 = 0.3 W
Wia	75 W	Maximum ratings Wia = 75W
I?	72 a	Maximum ratings I? = 72 a
Plate voltage	475 V	Maximum ratings Va = max. 475 V
Wia = max	40 W	Maximum ratings Wia = max. 40 W f = ms . 80 McLs
V	9 a	Maximum ratings V9a = max. 16.5 W Va = max. 380V
V	16.5 W	Maximum ratings V9a = max. 16.5 W Va = max. 380V
V	380 V	Maximum ratings V9a = max. 16.5 W Va = max. 380V
Published electrical value	83 mA	Maximum ratings 83 mA Wia = max. 32W
Published electrical value	32 W	Maximum ratings 83 mA Wia = max. 32W

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Wg	2.5 W	Maximum ratings Wg2 = max. 2.5 W
Control-grid voltage	200 V	Maximum ratings -Vg1 = max. 200 V
Published electrical value	5 mA	Maximum ratings 1g1 = max. 5 mA
Plate voltage	260 V	Maximum ratings Va = max. 260 V
Wia = max	22 W	Maximum ratings Wia = max. 22W
Plate voltage	325 V	Maximum ratings Va = 475 400 325 V
Vg	250 V	Maximum ratings Vg2 1) = 250 V
la	80 mA	Maximum ratings la = 83 80 80 mA
Published electrical value	3.5 mA	Maximum ratings 1g1 = 4 3.5 3.5 mA
lg	6 mA	Maximum ratings lg2 = 8 6 6 mA
Vg	95 V	Maximum ratings Vg1 p = 108 95 95V
Wig	0.3 W	Maximum ratings Wig1 0.4 0.3 0.3 W
Wia	26 W	Maximum ratings Wia = 39.5 32 26W
Wa	9 W	Maximum ratings Wa = 11.5 10 9W
Plate voltage	600 V	Maximum ratings Va = max. 600V
Wia = max	60 w	Maximum ratings Wia = max. 60w _8Q McLs



SOURCE DATA APPENDIX

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 · Beam Power

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	6.3 V	—
Heater/filament current	900 mA	—
Transconductance	6000 uS	—
Screen-grid amplification factor	8	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical plate-current reference	72 mA	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate/anode voltage	750 V	—
Maximum screen-grid voltage	300 V	—
Maximum plate/anode dissipation	30 W	—
Maximum screen-grid dissipation	3.5 W	—
Operating plate voltage	600 V	ClassC;Telegraphy;60MHz
RF output power	40 W	ClassC;Telegraphy;60MHz
Operating plate voltage	750 V	ClassC;Telegraphy;60MHz
RF output power	54 W	ClassC;Telegraphy;60MHz

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate/anode capacitance	7 pF	—
Control-grid capacitance	12 pF	—
Plate-grid capacitance	0.2 pF	—