



ELECTRONIC TUBE REFERENCE

QQE0420

Power - Tetrode (NOT beam) electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

TETRODE-TETRODE

Double tetrode designed for high-frequency amplifier and oscillator service. Its paired sections provide compact RF power generation and amplification.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 1.6 A	PARALLEL HEATER	6.3 V / 1.6 A
HEATING	Indirect	SERIES OPERATION	Capable
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Tetrode	
TRANSCONDUCTANCE	0.003 S
AMPLIFICATION FACTOR	6.5
MAXIMUM PLATE VOLTAGE	670 V
MAXIMUM SCREEN VOLTAGE	250 V
MAXIMUM SCREEN DISSIPATION	5 W
Identical repeated sections compressed to one row. Double tetrode for HF amplifier and oscillator service.	

SECTION2 Tetrode	
No fixed ratings recorded.	

Double tetrode for HF amplifier and oscillator 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 · Tetrode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode : oxyde	12.6 V	Cathode : oxyde 6.3 12.6 V
Katode : Oxyd If	800 mA	Katode : Oxyd If = 1.6 0.8 A

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacitances per system Ca	3.8 pF	Capacitances Capacitances per system Ca = 3.8 pF
Capacitds par systZme Cg	8 pF	Capacitances Capacitds par systZme Cg1 = 8 pF
Cg	65 pF	Capacitances Cg2k = 65 pF)

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current	30 mA	Typical characteristics Kenndaten S(Ia=30mA)2= 3 mA/V
Plate current	3 mA/V	Typical characteristics Kenndaten S(Ia=30mA)2= 3 mA/V
Published electrical value	2 a	Class C telegraphy 1)Including internal capacitor between grid No.2 and
Plate voltage	750 V	Maximum ratings Va = max. 750 V Va = max. 670 V
Plate voltage	670 V	Maximum ratings Va = max. 750 V Va = max. 670 V
Wia = max	18 W	Maximum ratings Wia = max. 2x18 W Wia = max. 2x16 W

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Wia = max	16 W	Maximum ratings Wia = max. 2x18 W Wia = max. 2x16 W
Wa = max	7.5 W	Maximum ratings Wa = max.2x7.5 W
Plate current	45 mA	Maximum ratings Ia = max. 2x45 mA
Screen-grid voltage	250 V	Maximum ratings Vg2 = max. 250 V
Wg	5 W	Maximum ratings Wg2 = max. 5W
Control-grid voltage	175 V	Maximum ratings -Vg1 = max. 175 V
Control-grid current	5 mA	Maximum ratings Ig1 = max. 2x5 mA
Vkf = max	100 V	Maximum ratings Vkf = max. 100 V
f	250 MHz	Maximum ratings f = 200 200 200 250 250 Mc/s
Plate voltage	400 V	Maximum ratings Va = 750 500 400 500 400 V
Screen-grid voltage	200 V	Maximum ratings Vg2 = 200 200 200 200 200 V
Control-grid voltage	-65 V	Maximum ratings Vg1 = -65 -65 -65 -65 -65 V
Plate current	40 mA	Maximum ratings Ia = 2x24 2x36 2x45 2x32 2x40 mA
Screen-grid current	14 mA	Maximum ratings Ig2 = 15 14 14 12 14 mA
Control-grid current	1 mA	Maximum ratings Ig1 = 2x1.4 2x1.3 2x1.4 2x0.9 2x1.0 mA
Vgl g	140 V	Maximum ratings Vgl g1' p = 150 150 150 140 140 V
Published electrical value	0.07 W	Maximum ratings 8ig1 = 2x0.10 2x0.09 2x0.10 2x0.06 2x0.07 W
Wg	2.8 W	Maximum ratings Wg2 3.0 2.8 2.8 2.4 2.8 W
via	16 W	Maximum ratings via = 2x18 2x18 2x18 2x16 2x16 W
Na	7.5 W	Maximum ratings Na = 2x5 2x5 2x5.25 2x7.0 2x7.5 W
WD	17 W	Maximum ratings WD = 26 26 25.5 18 17 W
f = max	2 s	Maximum ratings f = max. 200 Ms/s f = max. 2~O M2s
Vg = max	750 V	Maximum ratings Vg = max. 750 V Va = max. 670 V
Vg = max	670 V	Maximum ratings Vg = max. 750 V Va = max. 670 V

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Wia = max	25 W	Maximum ratings Wia = max. 2x25 W Wig = max.2x22 W
Wia = max	22 W	Maximum ratings Wia = max. 2x25 W Wig = max.2x22 W
wg = max	10 W	Maximum ratings wg = max. 2x10 W
Plate current	57.5 mA	Maximum ratings Ia = max. 2x57.5 mA
Y	200 MHz	Maximum ratings Y = 200 Mc/s
Plate voltage	750 V	Maximum ratings Va = 750V
Vgp	200 V	Maximum ratings Vgp = 200V
Control-grid voltage	50 V	Maximum ratings Vg1 = ..50V
Plate current	32.5 mA	Maximum ratings Ia = 2x32.5 mA
Screen-grid current	22 mA	Maximum ratings Ig2 = 22 mA
Control-grid current	2 mA	Maximum ratings Ig1 = 2x2.0 mA
Vglg	130 V	Maximum ratings Vglg1'p = 130 V
Wig	0.12 W	Maximum ratings Wig1 = 2x0.12 W
Wig	24.4 W	Maximum ratings Wig = 2x24.4 W
Wa	6.9 W	Maximum ratings Wa = 2x6.9 W



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 · Tetrode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode : oxyde VE = 6,3	12.6 V	—
Katode : Oxyd I = 1,6	800 mA	—
Va = max, Vg =max.,	670 V	—
Wia = max, Wia = max, 2x1	6 W	—
' = 750 500 400 500	400 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Va1 = -65 -65 -65 -65	~65 V	—
Ia = 2x24 2x36 2x45 2x32 2x4	0 mA	—
Ig2 15 14 14 12	14 mA	—
Ig1 = 2xt,4 2x%,3 2x1,4 2x0,9 2x1,	0 mA	—
Vg1g1'p = 150 150 150 140	140 V	—
Wig = 2x0,10 2x0,09 2x0,10 2x0,06 2x0,	7 W	—
Wgo = 3,0 2,8 2,8 2,4	2.8 W	—
Wia = 2x18 2x18 2x18 2x16 2x1	6 W	—
Wa = 2x5 2x5 2x5,25 2x7,0 2x7,	5 W	—
Wo = 26 26 25,5 18	17 W	—
f _ _=max, _ _	200 Mc/s	—
Va = max. 750 Vv Va max	670 v	—
Wia = max. 2x2 [1]	5 W	—
Wia = max. 2x2 [2]	2 W	—
Wa = max. 2x1	0 W	—
Ia = max. 2x5	7.5 mA	—
Woo max,	5 W	—
Vg2	200 v	—
Vg1	~-50 V	—
Ia = 2x3	2.5 mA	—
Ig2	22 mA	—
Igt = 2x2,	0 mA	—
Vgigi'p	130 V	—
Wig1 = 2x0,	12 W	—
Wg2	4.4 W	—
Wia = 2x2	4.4 W	—
Va = 2x6,	9 W	—
Wo	35 W	—
Wia = max. 2x1 [1]	1 W	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Wia = max. 2x1 [2]	0 W	—
Is = max.2x3	7.5 mA	—
Vgp = max	250 V	—
g2 = max	3.4 W	—
Vg1 = max	175 v	—
Vif = max,	100 V	—
f = 200	200 Mc/s	—
Va = 600	425 V	—
Vgg = 200	200 V	—
Ia = 2x18 2%	26 mA	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacitances per system Ca	3.8 pF	—
Capacités par systdme Cg1	8 pF	—
Cgdk	65 pF	—
Eenndaten \$(Xa [1]	30 mA	—
Eenndaten \$(Xa [2]	3 ma	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
et des broches max	180 °C	—

TUBE TINKER

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and their source documents.

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