



ELECTRONIC TUBE REFERENCE

QQC0415

Power - Tetrode (NOT beam) electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

TETRODE-TETRODE

Directly heated double tetrode designed for HF amplifier, oscillator, frequency-multiplier, and modulator service. Two power sections provide compact paired transmitting operation.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	8
NOMINAL HEATER	6 V / 680 mA	PARALLEL HEATER	3 V / 1.36 A
HEATING	Direct	SERIES OPERATION	Capable
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Tetrode	
AMPLIFICATION FACTOR	7.5
MAXIMUM PLATE VOLTAGE	450 V
MAXIMUM SCREEN VOLTAGE	250 V
MAXIMUM SCREEN DISSIPATION	7 W
Identical repeated sections compressed to one row. Directly heated double tetrode for HF amplifier, oscillator, multiplier and modulator service.	

SECTION2 Tetrode	
No fixed ratings recorded.	

Directly heated double tetrode for HF amplifier, oscillator, multiplier 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 · Tetrode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
If	680 mA	If = 0.68 A

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacit	6 s	Capacitances Capacit6s par systbme en push-pull
Plate capacitance	3.3 pF	Capacitances Ca = 3.3 pF Co = 1.7 pF
Plate capacitance	1.7 pF	Capacitances Ca = 3.3 pF Co = 1.7 pF
Control-grid capacitance	8.5 pF	Capacitances Cg1 = 8.5 pF Ci = 5.7 pF
Control-grid capacitance	5.7 pF	Capacitances Cg1 = 8.5 pF Ci = 5.7 pF
Grid-to-plate capacitance	0.05 pF	Capacitances Cag1.= 0.05 pF

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current	20 mA	Typical characteristics S3 (Ia= 20 mA) = 2 mA/V
Plate current	2 mA/V	Typical characteristics S3 (Ia= 20 mA) = 2 mA/V
Va Wo	2 V	Class C telegraphy Va Wo 2 Va Mo 2 Va w
Horizontal with pins	1 a	Class C telegraphy Horizontal with pins 1 and 5 in one
Plate voltage	600 V	Maximum ratings Va = max. 600 V Va = max. 450V
Plate voltage	450 V	Maximum ratings Va = max. 600 V Va = max. 450V

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Wia = max	18 W	Maximum ratings Wia = max.2x18 W Wia = max. 2x9 W
Wia = max	9 W	Maximum ratings Wia = max.2x18 W Wia = max. 2x9 W
Wa = max	6 W	Maximum ratings Wa = max. 2x6 W
Plate current	30 mA	Maximum ratings Ia = max.2x30 mA
Screen-grid voltage	250 V	Maximum ratings Vg2 = X. 250V
Wg	7 W	Maximum ratings Wg2 = max. 7W
Control-grid voltage	200 V	Maximum ratings _Vg 1 = max. 200 V
Control-grid current	5 mA	Maximum ratings Ig1 = max. 2x5 mA
Y	60 MHz	Maximum ratings Y = 60 60 60 Mc/s
Plate voltage	250 V	Maximum ratings Va = 600 400 250 V
Screen-grid voltage	175 V	Maximum ratings Vg2 = 200 200 175 V
Control-grid voltage	-70 V	Maximum ratings Vg 1 = -80 -80 -70 V
Plate current	30 mA	Maximum ratings Ia = 2x30 2x30 2x30 mA
Screen-grid current	6.5 mA	Maximum ratings Ig2 = 6 6 6.5 mA
Igt	1.8 mA	Maximum ratings Igt = 2x1.0 2x1.2 2x1.8 mA
Vgtgt'p	210 V	Maximum ratings Vgtgt'p = 210 210 210 V
Wig	0.17 W	Maximum ratings Wig1 = 2x0.1 2x0.11 2x0.17 W
Wg	1.1 W	Maximum ratings Wg2 1.2 1.2 1.1 W
Wia	7.5 W	Maximum ratings Wia = 2x18 2x12 2x7.5 W
Wa	2.2 W	Maximum ratings Wa = 2x4.7 2x3.2 2x2.2 W
Wp	10.6 W	Maximum ratings Wp = 26.6 17.6 10.6 W
I	186 MHz	Class C telegraphy I = 186 186 186 Mc/s
Plate voltage	250 V	Class C telegraphy Va = 600 400 250 V
Control-grid voltage	-70 V	Class C telegraphy Vg1 = -80 -80 -70 V
Screen-grid voltage	175 V	Class C telegraphy Vg2 = 200 200 175 V
Plate current	30 mA	Class C telegraphy Ia = 2x30 2x30 2x30 mA
Control-grid current	1.5 mA	Class C telegraphy I g1 = 2x1.0 2x1.0 2x1.5 mA
Published electrical value	4.5 mA	Class C telegraphy 1 g2 = 3. 0 3.5 4.5 mA
Vg	220 V	Class C telegraphy Vg1g1'p 210 210 220 V

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Wig	0.15 W	Class C telegraphy Wig1 = 2x0.1 2x0.1 2x0.15 W
Wia	7.5 W	Class C telegraphy Wia = 2x18 2x12 2x7.5 W
Wa	2.4 W	Class C telegraphy Wa = 2x5.2 2x3.6 2x2.4 W
Power output	10.2 W	Class C telegraphy Wo = 25.6 16.8 10.2 W
Plate voltage	600 V	Maximum ratings Va = max. 600 V Va = max. 450 V
Plate voltage	450 V	Maximum ratings Va = max. 600 V Va = max. 450 V
Wia = max	24 W	Maximum ratings Wia = max. 2x24 W Wia = max. 2x12 W
Wia = max	12 W	Maximum ratings Wia = max. 2x24 W Wia = max. 2x12 W



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 · Tetrode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament : oxyde Vf = 3-3,15") 6	-6.3 V	Modulator
Heizfaden: 0xyd If = 1,36	680 mA	Modulator
ia = max.2x1	8 W	—
max.2x3	0 mA	—
Vg2 = max,	250 v	—
WgZ = max	7 W	—
Vg1 = max.,	200 v	—
f = 60 60	60 Mc/s	—
Ve = 600 400	250 V	—
Vg2 = 200 200	175 v	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Vg1 = -80 -80	-70 V	—
Ia = 2x30 2x30 2x3	0 mA	—
Igo = 6 6	6.5 mA	—
Ig1 = 2x1,0 2x1,2 2x1,	8 mA	—
Wigt = 2x0,1 2x0, 11 2x0,	17 W	—
Wg2 = 1,2 1,2	1.1 W	—
Wiag = 2x18 2x12 2x7,	5 W	—
Wa = 2x4,7 2x3,2 2x2,	2 W	—
Wo = 26,6 17,6	10.6 W	—
Va = 600 400	250 V	ClassC;Telegraphy
Vg1 = =80 ~80	~70 V	ClassC;Telegraphy
Vg2 = 200 200	175 v	ClassC;Telegraphy
I, = 2x30 2x30 2%	30 mA	ClassC;Telegraphy
Ig1 = 2x1,0 2x1,0 2x1,	5 mA	ClassC;Telegraphy
Ig2 = 3,0 3,5	4.5 mA	ClassC;Telegraphy
Vgigl'p = 210 210	220 V	ClassC;Telegraphy
Wigi = 2x0,1 2x0,1 2x0,	15 W	ClassC;Telegraphy
Weo = 0,6 0,7	0.8 W	ClassC;Telegraphy
Wia = 2x18 2x12 2x7,	5 W	ClassC;Telegraphy
Wa = 2x5,2 2x3,6 2x2,	4 W	ClassC;Telegraphy
Wo = 25,6 16,8	10.2 W	ClassC;Telegraphy
Va = max, [1]	600 V	—
Va = max, [2]	450 V	—
Wig = max. 2x2 [1]	4 W	—
Wig = max. 2x2 [2]	2 W	—
Ia = max. 2x4	0 mA	—
Vg2 = max	250 V	—
Vg1 = max,	200 V	—
f = 60 60	60 Mc/s	ClassC;PushPull;Telegraphy
Va = 600 400	250 V	ClassC;PushPull;Telegraphy
Vg1 = ~80 -850	-70 V	ClassC;PushPull;Telegraphy
Ia = 2x40 2x40 2x4	0 mA	ClassC;PushPull;Telegraphy

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Ig1 = 2x1,2 2x2,0 2x2,	5 mA	ClassC;PushPull;Telegraphy

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Ca [1]	3.3 pF	PushPull
Ca [2]	177 pF	PushPull
Cg1 [1]	8.5 pF	PushPull
Cg1 [2]	5.7 pF	PushPull
Cagt1	0.05 pF	PushPull
Kenndeton 52/ (Ig [1])	20 mA	PushPull
Kenndeton 52/ (Ig [2])	2 mA	PushPull

TUBE TINKER

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and their source documents.

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