

ELECTRONIC TUBE REFERENCE

QQE0640

Voltage - Dual Tetrode electronic tube

CONSOLIDATED TECHNICAL DATA
2 SECTIONS
CONSTRUCTION
TETRODE-TETRODE

Internally neutralized double tetrode designed for HF amplification, oscillation, frequency multiplication, and modulation.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 1.8 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Tetrode	
MAXIMUM PLATE VOLTAGE	600 V
MAXIMUM SCREEN VOLTAGE	300 V
Identical repeated sections compressed to one row. Internally neutralized double tetrode for HF amplifier, oscillator, multiplier and modulator service.	

SECTION2 Tetrode	
MAXIMUM PLATE VOLTAGE	600 V
MAXIMUM SCREEN VOLTAGE	300 V
Second identical physical RF tetrode section; added to align rows with SectionCount.	

Internally neutralized 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	900 mA	If 1.8 0.9 A
(m) (tic/s) Va W	0 V	Modulator operation (m) (tic/s) Va W0 Va Po
above	150 MHz	Cooling above 150 Mc/s it may be necessary to direct a low
frequences superieures	150 MHz	Cooling frequences superieures 150 Mc/s. il peut ctre neces-
als	150 MHz	Cooling als 150 MHz benutzt wird. kann emn Luftstrom auf den

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
See page	3.2 pF	Capacitances See page 2 for internal Ca = 3.2 pF Co = 2.1 pF
See page	2.1 pF	Capacitances See page 2 for internal Ca = 3.2 pF Co = 2.1 pF
neutralisation (On. CO') C	10.5 pF	Capacitances neutralisation (On. CO') C 1 = 10.5 pF
Voir page	6.7 pF	Capacitances Voir page 2 pour neutra- Ci = 6.7 pF
Grid-to-plate capacitance	0.09 pF	Capacitances lisation interne (CO.CO') Cag1 < 0.09 pF
siehe Seite	0.035 pF	Capacitances siehe Seite 2 (CO. CO') C 1-CA < 0.035 pF

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Published electrical value	4.5 mA/V	Typical characteristics 4.5 mA/V
Plate current	30 mA	Typical characteristics Kenndaten (Ia= 30 mA) =
(m) Nc/s Va W	0 V	Class C telegraphy (m) Nc/s Va W0 Va W0 Va Wo Va SYo
Temperature of bulb and anode seals max	250 °C	Cooling Temperature of bulb and anode seals max. 250 °C
Pin-seal temperature	180 °C	Cooling Temperature of bottom pin seals max. 180 °C
broches du fond max	180 °C	Cooling broches du fond max. 180 °C
Anodenverschlusse max	250 °C	Cooling Anodenverschlusse max. 250 °C
Temperatur der Bodienstiftverschlusse max	180 °C	Cooling Temperatur der Bodienstiftverschlusse max. 180 °C
Plate voltage	750 V	Maximum ratings Va = max. 750 V Va = max. 600 V
Plate voltage	600 V	Maximum ratings Va = max. 750 V Va = max. 600 V
Wia = max	60 W	Maximum ratings Wia = max. 2x60 W Wia = max. 2x50 W
Wia = max	50 W	Maximum ratings Wia = max. 2x60 W Wia = max. 2x50 W
Plate current	110 mA	Maximum ratings Ia = max. 2x110 mA
Screen-grid voltage	300 V	Maximum ratings Vg2 = max. 300 V
Wg	3.5 W	Maximum ratings Wg2 = max. 2x3.5 W
V	175 V	Maximum ratings -V01 = max. 175 V
Control-grid current	5 mA	Maximum ratings Ig1 = max. 2x5 mA
Vkf = max	100 V	Maximum ratings Vkf = max. 100 V
Plate voltage	500 V	Maximum ratings Va = 600 750 520 500 V
Screen-grid voltage	250 V	Maximum ratings Vg2 = 250 250 250 250 V
Plate current	100 mA	Maximum ratings Ia = 2x100 2x80 2x100 2x100 mA
Control-grid current	3 mA	Maximum ratings Ig1 = 2x2.5 2x1.5 2x2.8 2x3 mA
Screen-grid current	20 mA	Maximum ratings Ig2 = 16 17 18 20 mA
Wia	50 W	Maximum ratings Wia = 2x60 2x60 2x52 2x50 W

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	750 V	Maximum ratings $V_a = \text{max. } 750\text{V}$ $V_a = \text{max. } 600\text{V}$
Plate voltage	600 V	Maximum ratings $V_a = \text{max. } 750\text{V}$ $V_a = \text{max. } 600\text{V}$
$W_{ia} = \text{max}$	60 W	Maximum ratings $W_{ia} = \text{max. } 2 \times 75 \text{ 'A}$ $V_{ia} = \text{max. } 2 \times 60 \text{ W}$
Plate voltage	22.5 W	Maximum ratings $V_a = \text{max. } 2 \times 22.5 \text{ W}$
Plate current	120 mA	Maximum ratings $I_a = \text{max. } 2 \times 120 \text{ mA}$
Screen-grid voltage	4 W	Maximum ratings $V_{g2} = \text{max. } 2 \times 4 \text{ W}$
$V_i = \text{max}$	175 V	Maximum ratings $-V_i = \text{max. } 175 \text{ V}$
f	250 MHz	Maximum ratings $f = 250 \text{ Mc/s}$
Plate voltage	750 V	Maximum ratings $V_a = 750\text{V}$
Control-grid voltage	80 V	Maximum ratings $V_{g1} = ..80\text{V}$
Screen-grid voltage	250 V	Maximum ratings $V_{g2} = 250\text{V}$
Plate current	90 mA	Maximum ratings $I_a = 2 \times 90 \text{ mA}$
Control-grid current	1.7 mA	Maximum ratings $I_{g1} = 2 \times 1.7 \text{ mA}$
Screen-grid current	14 mA	Maximum ratings $I_{g2} = 14 \text{ mA}$
V_{glg}	260 V	Maximum ratings $V_{glg1'p} = 260 \text{ V}$



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
Katode : 0xyd Ve 6,3	12.6 v	Modulator
I 1,8	900 mA	Modulator
$V_a = \text{max, [1]}$	750 V	—
$V_a = \text{max, [2]}$	600 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Wia = max, 2x6 [1]	0 W	—
Wia = max, 2x6 [2]	0 W	—
Wa = max, %	20 W	—
Ia = max, 2x1	10 mA	—
Vg2 = max	300 V	—
Wg2 = nmax. 2x3,	5 W	—
Vz1 = max,	175 V	—
f = 200 250 430	500 Mc/s	—
Va = 600 750 520	500 V	—
Vg2 = 250 250 250	250 V	—
Ia = 2x100 2x80 2x100 2x1	0 mA	—
Ig2 = 16 17 18	20 ma	—
Wg2 = 4 4,25 4,5	5 W	—
Wia = 2x60 2x60 2x52 2x5	0 W	—
Wa = 2x15 2x17,% 2x19 2x2	0 W	—
Wo = 90 85 66	60 W	—
Va = waX [1]	750 V	—
Va = waX [2]	600 V	—
Wia = max. 2x75 & Wia = max.2zx6	0 W	—
Wa = max,2x2	2.5 W	—
Vg2 = max.,	300 V	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
See page 2 {or %nternal) Ca	342 PF	PushPull
Voir page 2 pour neutra- C8 [1]	10.5 pF	PushPull
Voir page 2 pour neutra- C8 [2]	6.7 pF	PushPull
saffion igterne (CniCn') Cagn	< 0.09 pF	PushPull
siehe Seite 2 (Cp, Cn') Cag1-Cn	< 0.035 pF	PushPull
Xenndaten (Io [1])	30 ma	PushPull

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Xenndaten (Io [2])	4.5 mA	PushPull
0,6 500 500	6 C	PushPull
atode ;s Oxyad Ve 6,3	12.6 v	PushPull
Ir 1,8	900 mA	PushPull
See page 2 for %nternal\ Cy [1]	3.2 pF	PushPull
See page 2 for %nternal\ Cy [2]	2.1 pF	PushPull
Voir page 2 pour neutra- C&! [1]	10.5 pF	PushPull
Voir page 2 pour neutra- C&! [2]	6.7 pF	PushPull
lisation interne (Cp,Cpn') Cagd	< 0.09 pF	PushPull
siche Seite 2 (Cp, Cp') ve€)Cn ¢	0.035 pF	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Kenndaten (To [1])	30 mA	—
Kenndaten (To [2])	4.5 mA	—
0,6 500 500	6 C	—
above	150 Mc/s	—
fréquences superleures a	150 Mc/s	—
als	150 MHz	—
Temperature of bulb and anode seals max	250 °C	—
fréquences sur)cmoures a	150 Mc/s	—
scellements des sorties d'anode max	250 °C	—

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes,
and their source documents.

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