

ELECTRONIC TUBE REFERENCE

QQE0312

Power - Tetrode (NOT beam) electronic tube

CONSOLIDATED TECHNICAL DATA
2 SECTIONS
CONSTRUCTION
TETRODE-TETRODE

Double tetrode designed for RF Class-C amplifier, oscillator, frequency-multiplier, and modulator service. Its paired tetrode sections support versatile high-frequency power applications.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	9
NOMINAL HEATER	12.6 V / 410 mA	PARALLEL HEATER	6.3 V / 820 mA
HEATING	Indirect	SERIES OPERATION	Capable
CATHODE ARRANGEMENT	Common cathode	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Tetrode	
TRANSCONDUCTANCE	0.0033 S
AMPLIFICATION FACTOR	30
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	200 V
MAXIMUM PLATE DISSIPATION	7 W
MAXIMUM SCREEN DISSIPATION	2 W
MAXIMUM GRID DISSIPATION	0.2 W
MAXIMUM CATHODE CURRENT	65 mA
Two electrically identical beam-tetrode sections compressed to one representative row; shared/common values are preserved in parameters.	

SECTION2 Tetrode	
TRANSCONDUCTANCE	0.0033 S
MAXIMUM PLATE VOLTAGE	300 V

Double tetrode for RF Class-C amplifier, oscillator, multiplier and modulator service.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

195X Tesla

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

195X TESLA

Section 1 · Tetrode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published nominal value or midpoint of published range
Heater current	820 mA	Published nominal value or midpoint of published range

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 Vf	12.6 V	Cathode: oxyde Vf = 6.3 12.6V'
Katode : Oxyd	410 mA	Katode : Oxyd 0.41 A
zontally. it is recommanded that pins	2 a	Cooling zontally. it is recommanded that pins 2 and 7 are
zontally. it is recommanded that pins	7 a	Cooling zontally. it is recommanded that pins 2 and 7 are
ment. it es'_ recommande que les broches	7 s	Cooling ment. it es'_ recommande que les broches 2 et 7 sont

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
ist. ward empfohlen die Stifte	2 a	Cooling ist. ward empfohlen die Stifte 2 and 7 in einer
Published electrical value	5.3 V	Cooling 1)occasional operation at 5.3 V or 7.8 V (resp. 10.6 V or
Published electrical value	7.8 V	Cooling 1)occasional operation at 5.3 V or 7.8 V (resp. 10.6 V or
Published electrical value	10.6 V	Cooling 1)occasional operation at 5.3 V or 7.8 V (resp. 10.6 V or
Published electrical value	15.6 V	Cooling 15.6 V) is acceptable. The tube may be used with
operation occassionelle	5.3 V	Cooling operation occassionelle 5.3 V ou 7.8 V (10.6 ou 15.6
operation occassionelle	7.8 V	Cooling operation occassionelle 5.3 V ou 7.8 V (10.6 ou 15.6
oder	15.6 V	Cooling oder 15.6 V) 1st akzeptabel. Zur Verringerung des Heiz-
oder	1 s	Cooling oder 15.6 V) 1st akzeptabel. Zur Verringerung des Heiz-

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
The tube is internally Ca	2.6 pF	Capacitances The tube is internally Ca = 2.6 pF Co = 1 .4 pF
The tube is internally Ca	4 pF	Capacitances The tube is internally Ca = 2.6 pF Co = 1 .4 pF
Published electrical value	6.2 pF	Capacitances = 6.2 pF Ci = 5.1 pF
Published electrical value	5.1 pF	Capacitances = 6.2 pF Ci = 5.1 pF
internement Caga <	0.1 pF	Capacitances internement Caga < 0.1 pF

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current	30 mA	Typical characteristics $\mu 52g.(I_a = 30 \text{ mA}) = 7.5$
Plate current	30 mA	Typical characteristics $S (I_a = 30 \text{ mA}) = 3.3 \text{ mA/V}$
Plate current	3.3 mA/V	Typical characteristics $S (I_a = 30 \text{ mA}) = 3.3 \text{ mA/V}$
dans	1 a	Class C telegraphy dans 1a charge
Plate voltage	300 V	Maximum ratings $V_a = \text{max. } 300 \text{ V}$

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Wa = max	5 W	Maximum ratings Wa = max. 2x5 W
Wia = max	11.25 W	Maximum ratings Wia = max. 2x11.25 W
Ia max	45 mA	Maximum ratings Ia max. 2x45 mA
Vga = max	200 V	Maximum ratings Vga = max. 200 V
Wga = max	1 W	Maximum ratings Wga = max. 2x1 W E-
max	150 V	Maximum ratings = max. 150 V
Wg. = max	0.2 W	Maximum ratings Wg. = max. 2x0.2 W
LW' = max	3 mA	Maximum ratings LW' = max. 2x3 mA
Ik max	50 mA	Maximum ratings Ik max. 2x50 mA
max	225 mA	Maximum ratings = max. 225 mA
V~ max	100 V	Maximum ratings V~ max. 100 V
f	200 MHz	Maximum ratings f = 200 200 200 Mc/s



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1966 Tesla Tubes

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

1966 TESLA TUBES

Section 1 · Tetrode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Series heater voltage	12.6 V	Series
Series heater current	410 mA	Series
Parallel heater voltage	6.3 V	Parallel
Parallel heater current	820 mA	Parallel
Maximum anode input power per section - CCS	11.25 W	CCS
Maximum anode dissipation per section - CCS	5 W	CCS
Maximum anode current per section - CCS	45 mA	CCS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum anode input power per section - ICAS	15 W	ICAS
Maximum anode dissipation per section - ICAS	7 W	ICAS
Maximum anode current per section - ICAS	55 mA	ICAS
Maximum cathode current per section - ICAS	65 mA	ICAS
Maximum peak cathode current per section - ICAS	300 mA	ICAS
Maximum heater-cathode voltage	100 V	—
Maximum frequency	200 MHz	—
RF push-pull output power	14.5 W	ClassC PushPull CCS; 300 V, 200 MHz
RF push-pull output power	18.5 W	ClassC PushPull ICAS; 300 V, 200 MHz

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-screen/common capacitance	6.2 pF	Shared/representative
Anode capacitance	2.6 pF	Shared/representative
Anode-control-grid capacitance	<0.1 pF	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Characteristic anode voltage	200 V	—
Characteristic screen voltage	175 V	—
Characteristic control-grid voltage	-13 V	—
Characteristic anode current	30 mA	Per section
Characteristic screen current	8 mA	Shared table
Transconductance	3300 μ S	—
Screen/control-grid factor	7.5	—

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 $V_e = 6,3$	12.6 V	Modulator
Katode : Oxyd Ir - 0,82	410 mA	Modulator
$V_a = \text{max}$	300 V	—
$T_{ia} = \text{max.} 2 \times 1$	1.25 W	—
$V_g = \text{max}$	150 v	—
$W_{ery} = \text{max.} 2 \times 0,$	2 W	—
$I_k = \text{max,} 2 \times 5$	0 mA	—
$k_p = \text{max}$	225 mA	—
$Y_y = \text{max}$	100 v	—
$f = 200 \ 200$	200 Mc/s	—
$V_{gr \ gy} = 110 \ 110$	115 v	—
$I_a = 2\%37,5 \ 2 \times 33,5\% \ 2 \times 3$	5 mA	—
$I_g = 2,3 \ 1,8$	2.2 ua	—
$I_g = 2 \times 0,9 \ 2,2$	2.7 ma	—
$W_g = 2 \times 4 \ 2\%2,9 \ 2 \times 2,$	8 W	—
$W_{gz} = 0.4 \ 0,3$	0.33 W	—
$W_{igs} = 2 \times 0,05 \ 0,12$	0.14 W	—
$W_{io} = 1435 \ i$	8.4 W	—
$W_o = 12 \ 9$	7.4 W	—
$V_a = \text{max,}$	300 V	PushPull

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
The tube [1]	1 s	PushPull
The tube [2]	2.6 pF	PushPull
Le tube est neutrodyné ©&	6.2 pF	PushPull

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Hgagr (Ia	30 ma	—
Iz	30 ma	—
Temp. d'ampoule max [1]	225 c	—
Temp. d'ampoule max [2]	120 C	—
Occasional operation at [1]	5.3 V	—
Occasional operation at [2]	7.8 V	—
Occasional operation at [3]	10.6 V	—
Shipping weight, poids brut, Bruttogewicht: 23 g	15.6 V	—
Opération occasionelle & 5,3 Vou	7.8 V	—
Celegantliche Wirkung bei [1]	5.3 V	—
Celegantliche Wirkung bei [2]	7.8 V	—
Celegantliche Wirkung bei [3]	10.6 V	—
oder	15.6 V	—

TUBE TINKER

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and their source documents.

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