



ELECTRONIC TUBE REFERENCE

QE0410

Power - Tetrode (NOT beam) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TETRODE

RF tetrode designed for high-frequency amplifier, oscillator, and frequency-multiplier service. Its transmitting construction supports multiple radio-frequency power functions.

GENERAL CHARACTERISTICS

BASE DESIGNATION	B9G	BASE PINS	9
NOMINAL HEATER	6.3 V / 600 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Tetrode	
TRANSCONDUCTANCE	0.0019 S
AMPLIFICATION FACTOR	5.6
MAXIMUM PLATE VOLTAGE	400 V
MAXIMUM SCREEN VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	14.5 W
MAXIMUM SCREEN DISSIPATION	2 W
MAXIMUM CATHODE CURRENT	50 mA
<i>RF tetrode for HF amplifier, oscillator and frequency-multiplier service.</i>	

RF tetrode for HF amplifier, oscillator and frequency-multiplier 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
Chaufrage: indirect If	600 mA	Chaufrage: indirect If = 0.6 A

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacitances Ca	5.4 pF	Capacitances Capacitances Ca = 5.4 pF
Capacitds Cg	8 pF	Capacitances Capacitds Cg1 = 8 pF
Kapazitäten Cag	0.1 pF	Capacitances Kapazitäten Cag1 < 0.1 pF

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current	25 mA	Typical characteristics Caractdristiques types S (Ia=25 mA)= 1.9 mA/V
Plate current	1.9 mA/V	Typical characteristics Caractdristiques types S (Ia=25 mA)= 1.9 mA/V
Vg = max	400 V	Maximum ratings Vg = max. 400 V Wg1 = max. 0.25 W
Vg = max	0.25 W	Maximum ratings Vg = max. 400 V Wg1 = max. 0.25 W
Wa max	7.5 W	Maximum ratings Wa max. 7.5 W Rg1 = max. 0.1 M4
Screen-grid voltage	250 V	Maximum ratings Vg2 = max. 250 V Ig1 = max. 6 mA
Screen-grid voltage	6 mA	Maximum ratings Vg2 = max. 250 V Ig1 = max. 6 mA
P	2 W	Maximum ratings P1g2 = max. 2 W Ig = max. 50 mA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
P	50 mA	Maximum ratings P1g2 = max. 2 W Ig = max. 50 mA
Vkf = max	100 V	Maximum ratings Vkf = max. 100 V
Plate voltage	280 V	Class C telegraphy Va = 300 300 300 300 300 280 V
Vgl	-50 V	Class C telegraphy Vgl = -60 -35 -60 -50 -30 -50 V
Screen-grid voltage	250 V	Class C telegraphy Vg2 = 250 150 250 250 150 250 V
Plate current	46 mA	Class C telegraphy Ia = 43 40 44.5 46 44 2x46 mA
Screen-grid current	3.5 mA	Class C telegraphy Ig2 = 6.7 7.2 5.3 4 4.5 2x3.5 mA
Vglp	55 V	Class C telegraphy Vglp 68 58 68 57 52 55 V
ga	12.9 W	Class C telegraphy ga 12.9 1 12 13.4 13.8 13.2 2x12.9 W
Plate voltage	7.5 W	Class C telegraphy ~Va = 4.9 4.9 6 7.5 6.9 2x7.5 W
Power output	10.8 W	Class C telegraphy Wo = 8 7.1 7.4 6.3 6.3 10.8 W
Vg	176 V	Class C telegraphy Vg2p = 176 V
Vrmod	5 W	Class C telegraphy Vrmod = .5 W
Plate voltage	250 V	Class C telegraphy Va = 300 300 250 V
Control-grid voltage	-120 V	Class C telegraphy Vg1 -120 -120 -120 V
Vg	200 V	Class C telegraphy Vg2 250 200 200 V
Plate current	36.8 mA	Class C telegraphy Ia = 43.3 38.4 36.8 mA
Ig	1.1 mA	Class C telegraphy Ig1 1.2 1.5 1.1 mA
Screen-grid current	2.1 mA	Class C telegraphy Ig2 = 5.5 2.6 2.1 mA
Vg	144 V	Class C telegraphy Vg1p 124 120 144 V
Wg	0.42 W	Class C telegraphy Wg2 = 1.4 0.52 0.42 W
Wia	9.2 W	Class C telegraphy Wia = 13 11.5 9.2 W
Wa	6.9 W	Class C telegraphy Wa 7.4 7.1 6.9 W
Wo	2.3 W	Class C telegraphy Wo 5.6 4.4 2.3 W
Va	225 V	Class C telegraphy Va 300 275 225 V
Control-grid voltage	-140 V	Class C telegraphy Vg1 = -140 -140 -140 V

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen-grid voltage	200 V	Class C telegraphy Vg2 = 250 200 200 V
Plate current	36 mA	Class C telegraphy Ia = 34.3 36 2x36 mA
Control-grid current	1.3 mA	Class C telegraphy Ig1 = 0 1.5 2x1.3 mA
Ig	2.5 mA	Class C telegraphy Ig2 2.8 2.5 2x2.5 mA
Vg	152 V	Class C telegraphy Vg1 p = 130 142 152 V
Wg	0.5 W	Class C telegraphy Wg2 0.7 0.5 2x0.5 W
Wia	8.1 W	Class C telegraphy Wia = 10.3 9.9 2x8.1 W
Wa	6.6 W	Class C telegraphy Wa 7.1 7.1 2x6.6 W
Wa	3 W	Class C telegraphy Wa 3.2 2.8 3 W
Published electrical value	2 A	Class C telegraphy 9 1-{A052=2A 00 _



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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	6.3 V	—
Heater/filament current	600 mA	—
Transconductance	1900 uS	—
Screen-grid amplification factor	5.6	—
Typical plate voltage	300 V	—
Typical screen-grid voltage	250 V	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate/anode voltage	400 V	—
Maximum screen-grid voltage	250 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate/anode dissipation	14.5 W	—
Maximum screen-grid dissipation	2 W	—
Operating plate voltage	300 V	ClassC;Telegraphy;31.5MHz
RF output power	8 W	ClassC;Telegraphy;31.5MHz
Operating plate voltage	300 V	ClassC;Telegraphy;75MHz
RF output power	5.6 W	ClassC;Telegraphy;75MHz

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate/anode capacitance	5.4 pF	—
Control-grid capacitance	8 pF	—
Plate-grid capacitance	0.1 pF	—

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