

ELECTRONIC TUBE REFERENCE

QBL54000

Power - Tetrode (NOT beam) (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TETRODE

Directly heated forced-air-cooled transmitting tetrode, QBL5-4000, designed for RF amplification, modulation, and frequency multiplication with multi-kilowatt ratings. Alternate designation of type 7704.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 32.5 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Tetrode	
TRANSCONDUCTANCE	0.011 S
AMPLIFICATION FACTOR	8.5
MAXIMUM PLATE VOLTAGE	5500 V
MAXIMUM SCREEN VOLTAGE	800 V
MAXIMUM PLATE DISSIPATION	3000 W
MAXIMUM SCREEN DISSIPATION	100 W
MAXIMUM GRID DISSIPATION	30 W
MAXIMUM CATHODE CURRENT	1.3 A
Extracted from supplied datasheet.	

A directly heated forced-air-cooled transmitting tetrode (QBL5-4000) for RF amplification, modulation and frequency multiplication, with multi-kilowatt ratings. This is the alternate designation for 7704.

SOURCE OPERATING CONDITIONS

1999 Philips 0-D

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

1999 PHILIPS 0-D

Section 1 · Tetrode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament voltage	6.3 V	—
Filament current	32.5 A	—
Amplification factor g ₁ -g ₂	8.5	—
Transconductance	11000 μ S	At5kV800V0.6A
Plate Voltage	4 kV	PublishedLine: Plate Voltage 5 5 4 4 kV
Grid #	120 mA	PublishedLine: Grid #2 Current 100 100 120 120 mA
Plate Dissipation	1.5 kW	PublishedLine: Plate Dissipation 1.4 1.6 1.25 1.5 kW
Power Output	2.9 kW	PublishedLine: Power Output 4.1 3.9 3.15 2.9 kW
Plate Current	0.9 mA	PublishedLine: Plate Current 0.9 mA
Plate Input Power	3.6 kW	PublishedLine: Plate Input Power 3.6 kW
Modulation Power	1.8 kW	PublishedLine: Modulation Power 1.8 kW
Plate Current	1280 mA	PublishedLine: Plate Current 8 ϕ 1300 80 1290 70 1280 mA
Power QOutput	3.3 kW	PublishedLine: Power QOutput - 4.4 - 3.85 - 3.3 kW

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage maximum	5.5 kV	RFClassC
Plate dissipation maximum	3 kW	—
Plate current maximum	1.3 A	RFClassB
Screen voltage maximum	800 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen dissipation maximum	100 W	—
Grid dissipation maximum	30 W	—
Power output	4.1 kW	RFClassC75Mc/s
Grid No	0.35 pF	PublishedLine: Grid No. 1 to plate max. 0.35 pF i 'R
Input	23.5 pF	PublishedLine: Input 23.5 pF P
Output	8.4 pF	PublishedLine: Output 8.4 pF
(connector	30 Mc/s	PublishedLine: (connector 40650 may be used ot frequencies below 30 Mc/s only)
Frequency	220 Mc/s	PublishedLine: Frequency 30 110 220 Mc/s
D.C. Plate Input Power	5.5 kW	PublishedLine: D.C. Plate Input Power 5.5 kW
Plete Dissipation	3 kW	PublishedLine: Plete Dissipation 3 kW
Plate Yoltage	3.2 kv	PublishedLine: Plate Yoltage 4.5 4 3.2 kv
Grid #	80 mA	PublishedLine: Grid #1 Voltage 80 mA

TUBE TINKER

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