

ELECTRONIC TUBE REFERENCE

TBW614

Power - Triode (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TRIODE

Transmitting power triode intended for RF amplification, oscillator, modulation, or industrial generator service. Manufacturer documentation emphasizes professional radio-frequency operation and substantial power handling.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 130 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Triode	
TRANSCONDUCTANCE	0.023 S
AMPLIFICATION FACTOR	17.5
MAXIMUM PLATE VOLTAGE	8000 V
MAXIMUM PLATE DISSIPATION	12000 W
MAXIMUM CATHODE CURRENT	4 A
Published filament data, capacitances, typical characteristics, limiting values and RF operating conditions reviewed.	

TBW614 is a Philips water-cooled industrial RF-generator transmitting triode. Its datasheet specifies direct-filament operation, RF power ratings, cooling requirements, capacitances and representative operating conditions.

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 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament voltage	6.3 V	DirectlyHeated
Filament current	130 A	DirectlyHeated
Amplification factor	17.5	Published
Transconductance	23000 μ S	Published

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	8000 V	Published limit
Maximum plate dissipation	12000 W	Published limit
Maximum plate/cathode current	4 A	Published limit
Maximum starting filament current	400 A	FilamentStarting
Plate voltage	6000 V	IndustrialRF
Plate current	3.3 A	IndustrialRF
Plate input power	19.8 kW	IndustrialRF
Power output	14.3 kW	IndustrialRF

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate-to-cathode capacitance	1.2 pF	Published
Grid capacitance	44.5 pF	Published
Grid-to-plate capacitance	33.5 pF	Published

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 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	6.3 V	—
Heater/filament current	136 A	—
Transconductance	23000 μ S	—
Amplification factor	17.5	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	7000 V	—
Maximum plate dissipation	15000 W	—
Maximum cathode current	3 A	—
Operating plate voltage	7000 V	IndustrialClassC;30MHz
Operating plate current	3 A	IndustrialClassC;30MHz
Output power	17700 W	IndustrialClassC;30MHz

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate/anode capacitance	1.2 pF	—
Grid capacitance	44.5 pF	—
Plate-grid capacitance	33.5 pF	—

TUBE TINKER

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and their source documents.

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