ELECTRONIC TUBE REFERENCE

TBW1225

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

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
TRIODE

Philips water-cooled transmitting triode designed particularly for industrial RF generators. With about 13 kV plate capability and 20 kW dissipation, it provides rugged multi-kilowatt oscillator and amplifier service.

General characteristics

BASE DESIGNATION	–	**BASE PINS**	–
NOMINAL HEATER	8 V / 98 A	**PARALLEL HEATER**	– / –
HEATING	Direct	**SERIES OPERATION**	Not specified
CATHODE ARRANGEMENT	Separate cathodes	**SECTION CONSTRUCTION**	Similar

Section ratings

SECTION1 Triode

TRANSCONDUCTANCE	0.02 S
AMPLIFICATION FACTOR	34
MAXIMUM PLATE VOLTAGE	13000 V
MAXIMUM PLATE DISSIPATION	20000 W
MAXIMUM CATHODE CURRENT	4.8 A

Published filament data, capacitances, typical characteristics, limiting values and RF operating conditions reviewed.

TBW1225 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	**8 V**	DirectlyHeated
Filament current	**98 A**	DirectlyHeated

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Maximum plate voltage	**13000 V**	Published limit
Maximum plate dissipation	**20000 W**	Published limit
Maximum plate/cathode current	**4.8 A**	Published limit
Maximum operating frequency	**30 MHz**	RFService
Maximum starting filament current	**210 A**	FilamentStarting
Maximum grid current	**800 mA**	RFService
Plate voltage	**12000 V**	ClassC 30MHz
Plate current	**3.2 A**	ClassC 30MHz
Grid current	**500 mA**	ClassC 30MHz
Plate input power	**38.4 kW**	ClassC 30MHz
Plate dissipation	**9.4 kW**	ClassC 30MHz
Power output	**29 kW**	ClassC 30MHz

SOURCE OPERATING CONDITIONS

1999 Philips E-Z

SOURCE PDF

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	**8 V**	—
Heater/filament current	**98 A**	—
Transconductance	**20000 uS**	—
Amplification factor	**34**	—

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Maximum plate voltage	**13000 V**	—
Maximum plate dissipation	**20000 W**	—
Maximum cathode current	**4.8 A**	—
Operating plate voltage	**12000 V**	IndustrialClassC;30MHz
Operating plate current	**3.2 A**	IndustrialClassC;30MHz
Output power	**29000 W**	IndustrialClassC;30MHz

CAPACITANCE		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Plate/anode capacitance	**0.4 pF**	—
Grid capacitance	**37 pF**	—
Plate-grid capacitance	**30 pF**	—

Tube Tinker

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

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