

ELECTRONIC TUBE REFERENCE

TBW1238

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	8 V / 130 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Triode	
TRANSCONDUCTANCE	0.025 S
AMPLIFICATION FACTOR	21
MAXIMUM PLATE VOLTAGE	13000 V
MAXIMUM PLATE DISSIPATION	20000 W
MAXIMUM CATHODE CURRENT	5 A
Published filament data, capacitances, typical characteristics, limiting values and RF operating conditions reviewed.	

TBW1238 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	130 A	DirectlyHeated
Amplification factor	21	Published
Transconductance	25000 μ S	Published

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	13000 V	Published limit
Maximum plate dissipation	20000 W	Published limit
Maximum plate/cathode current	5 A	Published limit
Maximum operating frequency	30 MHz	RFSERVICE
Maximum starting filament current	280 A	FilamentStarting
Maximum grid current	1.5 A	RFSERVICE
Plate voltage	12000 V	ClassC 30MHz
Plate current	4.5 A	ClassC 30MHz
Grid current	900 mA	ClassC 30MHz
Plate input power	54 kW	ClassC 30MHz
Plate dissipation	15 kW	ClassC 30MHz
Power output	39 kW	ClassC 30MHz

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	23.5 pF	Published



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 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	8 V	—
Heater/filament current	130 A	—
Transconductance	22000 uS	—
Amplification factor	21	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	12000 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	39000 W	IndustrialClassC;30MHz

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate/anode capacitance	0.9 pF	—
Grid capacitance	45 pF	—
Plate-grid capacitance	23.5 pF	—