



ELECTRONIC TUBE REFERENCE

TBW15125

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	17.5 V / 196 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
PLATE RESISTANCE	270 Ω
TRANSCONDUCTANCE	0.05 S
AMPLIFICATION FACTOR	27
MAXIMUM PLATE VOLTAGE	15000 V
MAXIMUM PLATE DISSIPATION	50000 W
MAXIMUM CATHODE CURRENT	12 A
<i>Published filament data, capacitances, typical characteristics, limiting values and RF operating conditions reviewed.</i>	

TBW15125 is a Philips water-cooled very-high-power transmitting triode equivalent to TBW12100 except for filament energizing data. 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	17.5 V	DirectlyHeated
Filament current	196 A	DirectlyHeated
Amplification factor	27	Published
Transconductance	50000 μ S	Published
Single-phase filament voltage	17.5 V	SinglePhaseFilament
Single-phase filament current	196 A	SinglePhaseFilament
Three-phase filament voltage	15.5 V	ThreePhaseFilament
Three-phase filament current	131 A	ThreePhaseFilament

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	15000 V	Published limit
Maximum plate dissipation	50000 W	Published limit
Maximum plate/cathode current	12 A	Published limit
Maximum operating frequency	30 MHz	RFService
Single-phase maximum starting current	420 A	SinglePhaseFilament
Three-phase maximum starting current	280 A	ThreePhaseFilament
Plate voltage	12000 V	ClassC 15MHz
Plate current	12 A	ClassC 15MHz

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Power output	108 kW	ClassC 15MHz

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate-to-cathode capacitance	3.4 pF	Published
Grid capacitance	116 pF	Published
Grid-to-plate capacitance	86 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	17.5 V	—
Heater/filament current	196 A	—
Transconductance	50000 uS	—
Amplification factor	27	—
Plate resistance	270 ohm	—
Three-phase filament voltage	15.5 V	ThreePhase
Three-phase filament current	131 A	ThreePhase
Single-phase filament voltage	17.5 V	SinglePhase
Single-phase filament current	196 A	SinglePhase

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	15000 V	—
Maximum plate dissipation	50000 W	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum cathode current	12 A	—
Operating plate voltage	12000 V	ClassC;Telegraphy;15MHz
Operating plate current	12 A	ClassC;Telegraphy;15MHz
Output power	108000 W	ClassC;Telegraphy;15MHz