

ELECTRONIC TUBE REFERENCE

PB3800

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

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Philips RF power pentode designed for high-frequency amplifier and oscillator service. It combines transmitter output capability with radio-frequency generation in professional equipment.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	12 V / 8.5 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Pentode	
TRANSCONDUCTANCE	0.0065 S
AMPLIFICATION FACTOR	3.5
MAXIMUM PLATE VOLTAGE	3000 V
MAXIMUM SCREEN VOLTAGE	600 V
MAXIMUM PLATE DISSIPATION	450 W
MAXIMUM SCREEN DISSIPATION	100 W
MAXIMUM CATHODE CURRENT	700 mA
Promoted where the locked schema directly matches published RF values; frequency/service-specific limits and operating conditions are retained as parameter rows.	

RF power pentode for high-frequency amplifier and oscillator service.

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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	3000 V	RFPowerTube
Maximum screen voltage	600 V	RFPowerTube
Application	RF power pentode for high-frequency amplifier and oscillator service.	SourceDescription
Service category	RF/AF power service as specified in source	RFPowerTube
Heater/filament voltage	12 V	RFPowerTube
Heater/filament current	8.5 A	RFPowerTube
Operating frequency	60 MHz	RFPowerAmplifier
Plate voltage	3000 V	RFPowerAmplifier
Plate current	550 mA	RFPowerAmplifier
Screen voltage	300 V	RFPowerAmplifier
Maximum frequency	200 MHz	RFPowerAmplifier

CONSTRUCTION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heating method	Direct	RFPowerTube
Device class	Pentode	RFPowerTube

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	6500 μ S	RFPowerTube
Screen-to-control-grid amplification factor	3.5	RFPowerTube

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate capacitance	21 pF	RFPowerTube
Control-grid capacitance	29 pF	RFPowerTube



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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	3000 V	—
Maximum screen voltage	750 V	—
Maximum plate dissipation	450 W	—
Maximum screen dissipation	100 W	—
Maximum cathode current	700 mA	—
Maximum peak cathode current	4.5 A	—
Operating plate voltage	3000 V	ClassC;Telegraphy
Operating screen voltage	600 V	ClassC;Telegraphy
Operating plate current	700 mA	ClassC;Telegraphy
RF output power	1200 W	ClassC;Telegraphy
Efficiency	57 %	ClassC;Telegraphy

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	6500 uS	—
Screen-grid amplification factor	3.5	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate-cathode capacitance	21 pF	—
Grid-cathode capacitance	29 pF	—
Plate-grid capacitance	0.05 pF	—

TUBE TINKER

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

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