



ELECTRONIC TUBE REFERENCE

E810F

Voltage - Pentode electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

PENTODE

Very-high-transconductance special-quality pentode documented by Philips for demanding professional amplification. Its defining characteristics are unusually high transconductance and premium construction rather than a separately documented specialized application.

GENERAL CHARACTERISTICS

BASE DESIGNATION	NOVAL	BASE PINS	9
NOMINAL HEATER	6.3 V / 340 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Pentode	
PLATE RESISTANCE	42000 Ω
TRANSCONDUCTANCE	0.05 S
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	200 V
MAXIMUM PLATE DISSIPATION	5 W
MAXIMUM SCREEN DISSIPATION	1 W
MAXIMUM GRID DISSIPATION	0.01 W
MAXIMUM CATHODE CURRENT	50 mA
<i>Special-quality long-life shock- and vibration-resistant very-high-transconductance wide-band amplifier pentode.</i>	

E810F is described in the supplied Philips material as a very-high-transconductance special-quality pentode. Published electrical ratings and characteristics were extracted from the supplied datasheet.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Philips Electron Tubes Handbook V1a

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1963 PHILIPS ELECTRON TUBES HANDBOOK V1A

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply voltage	135 V	—
Screen supply voltage	165 V	—
Plate current	35 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen current	4.4–5.6 mA	—
Transconductance	42000–58000 uS	—
Plate resistance	42 kOhm	—
Equivalent noise resistance	110 ohm	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid capacitance	13–16 pF	—
Plate capacitance	3.9–4.3 pF	—

1963 Philips Electron Tubes Handbook V3

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1963 PHILIPS ELECTRON TUBES HANDBOOK V3

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published heater rating
Heater current	340 mA	Published heater rating
Transconductance	50000 μ S	Published characteristic point
Amplification factor	57	Published characteristic point
OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply voltage	135 V	Published characteristic point
Screen supply voltage	165 V	Published characteristic point
Grid bias	12.5 V	Published characteristic point
Plate current	35 mA	Published characteristic point
Screen current	5 mA	Published characteristic point
CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate capacitance	3.5 pF	Published
Input capacitance	14.5 pF	Published



1963 Siemens

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1963 SIEMENS

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Screen Voltage	165 V	PentodeConnection
Typical Plate Current	35 mA	PentodeConnection
Typical Screen Current	5 mA	PentodeConnection



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
Heater voltage	6.3 V	Published datasheet value
Heater voltage	6 V	Published datasheet value
Heater current	340 mA	Published datasheet value
Heater current	360 mA	Published datasheet value

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode current	35 mA	Published datasheet value
Anode current	39 mA	Published datasheet value
Anode current	40 mA	Published datasheet value
Anode voltage	250 V	Published datasheet value
Screen-grid voltage	200 V	Published datasheet value
Mutual conductance	50 mA/V	Published datasheet value
Equivalent noise resistance	110 Ohm	Published datasheet value
Quality factor frequency	250 MHz	Published datasheet value



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