



ELECTRONIC TUBE REFERENCE

E80F

Voltage - Pentode electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

PENTODE

Special-quality audio-frequency amplifying pentode for industrial applications requiring stable characteristics and long life. Philips and Amperex documentation emphasize professional AF voltage amplification with extended dependable service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	NOVAL	BASE PINS	9
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Pentode	
PLATE RESISTANCE	1500000 Ω
TRANSCONDUCTANCE	0.00185 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	200 V
MAXIMUM PLATE DISSIPATION	1.3 W
MAXIMUM CATHODE CURRENT	9 mA
Special-quality long-life pentode for professional amplifier service.	

Special-quality audio-frequency amplifying pentode for industrial applications requiring stable characteristics and long life.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1958 Amperex Industrial

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

1958 AMPEREX INDUSTRIAL

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	300 V	Published table
Plate voltage	200 V	Published table
Screen voltage	250 V	Published table
Plate current	9 mA	Published table

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	1850 ohm	Published table
Transconductance	650 μ S	Published table
Amplification factor	25	Published table
Heater/filament voltage	6.3 V	Published rating
Heater/filament current	300 mA	Published rating



SOURCE OPERATING CONDITIONS

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1963 Amperex Condensed

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

1963 AMPEREX CONDENSED

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published rating

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater current	300 mA	Published rating
Published characteristic value	5	PremiumQuality
Published characteristic value 2	7.3	PremiumQuality

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	300 V	PremiumQuality
Plate voltage	200 V	PremiumQuality
Plate current	9 mA	PremiumQuality



SOURCE OPERATING CONDITIONS

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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 voltage	250 V	—
Screen voltage	100 V	—
Plate current	3 mA	—
Screen current	0.65 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	1850 uS	—
Plate resistance	1.5 MOhm	—
Amplification factor grid2-grid1	25	—



SOURCE OPERATING CONDITIONS

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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	300 mA	Published heater rating
Transconductance	1850 μ S	Published characteristic point
Plate resistance	1500000 ohm	Published characteristic point
Amplification factor	25	Published characteristic point

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	Published characteristic point
Screen voltage	100 V	Published characteristic point
Plate current	3 mA	Published characteristic point
Screen current	0.65 mA	Published characteristic point



SOURCE OPERATING CONDITIONS

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1967 Mullard Receiving Tubes for Maintenance

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

1967 MULLARD RECEIVING TUBES FOR MAINTENANCE

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
I _h	300 mA	Published in approved E80F.pdf target datasheet; Section1
The maximum variation of heater current at V _h = 6.3V is ± 1	5 mA	Published in approved E80F.pdf target datasheet; Section1
g _m	1.2 mA	Published in approved E80F.pdf target datasheet; Section1

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
C _{f n 5.0}	0.5 pF	Published in approved E80F.pdf target datasheet; Section1
Cou t 7.3	0.5 pF	Published in approved E80F.pdf target datasheet; Section1
C :~ l- h <	0.002 pF	Published in approved E80F.pdf target datasheet; Section1
e ll - 1\	3.7 pF	Published in approved E80F.pdf target datasheet; Section1
t la 3.0	0.5 mA	Published in approved E80F.pdf target datasheet; Section1
tg m 1.85	0.35 mA	Published in approved E80F.pdf target datasheet; Section1
P g2 max	400 mW	Published in approved E80F.pdf target datasheet; Section1
h, max	9 mA	Published in approved E80F.pdf target datasheet; Section1
Tbulb max	170 °C	Published in approved E80F.pdf target datasheet; Section1



SOURCE OPERATING CONDITIONS

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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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published datasheet value
Heater voltage	6 V	Published datasheet value
Heater voltage	4.5 V	Published datasheet value
Heater current	300 mA	Published datasheet value
Heater current	315 mA	Published datasheet value

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode current	3 mA	Published datasheet value
Anode current	1.37 mA	Published datasheet value
Anode voltage	250 V	Published datasheet value
Anode voltage	40 V	Published datasheet value
Screen-grid voltage	100 V	Published datasheet value
Screen-grid voltage	40 V	Published datasheet value
Mutual conductance	1.85 mA/V	Published datasheet value

TUBE TINKER

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and their source documents.

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