

ELECTRONIC TUBE REFERENCE

ECF801

Voltage - Triode Pentode electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Triode-pentode combination for electronic signal service; available source material does not establish a narrower functional application confidently.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9QA	BASE PINS	9
NOMINAL HEATER	6.3 V / 410 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

9QA - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1	B	G3 – Suppressor Grid	CONNECTED
PIN1	B	K – Cathode	CONNECTED
PIN1	–	IS – Internal Screen	CONNECTED
PIN2	B	G1 – Control Grid	CONNECTED
PIN3	B	G3 – Suppressor Grid	CONNECTED
PIN3	B	K – Cathode	CONNECTED
PIN3	–	IS – Internal Screen	CONNECTED
PIN4	–	H – Heater	CONNECTED
PIN5	–	H – Heater	CONNECTED
PIN6	B	P – Plate (Anode)	CONNECTED
PIN7	B	G2 – Screen Grid	CONNECTED
PIN8	A	P – Plate (Anode)	CONNECTED
PIN9	–	–	UNKNOWN

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	9000 Ω
TRANSCONDUCTANCE	0.0085 S
AMPLIFICATION FACTOR	55
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	1.5 W
MAXIMUM CATHODE CURRENT	25 mA
<i>Published maximum ratings and typical characteristics promoted from the approved source.</i>	

SECTION2 Pentode	
PLATE RESISTANCE	250000 Ω
TRANSCONDUCTANCE	0.0075 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	2.5 W
MAXIMUM SCREEN DISSIPATION	0.6 W
MAXIMUM CATHODE CURRENT	30 mA
<i>Published maximum ratings and typical characteristics promoted from the approved source.</i>	

Triode-pentode for VHF frequency-converter service.



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 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published heater rating
Heater current	410 mA	Published heater rating
Heater voltage	6.3 V	Published rating
Heater current	410 mA	Published rating

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	VHF television tuner frequency changer	Published description



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1968 Mazda Belvu

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

1968 MAZDA BELVU

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published nominal value
Heater current	410 mA	Published nominal value

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate dissipation	1.5 W	Published maximum rating

1968 MAZDA BELVU

Section 2 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published nominal value
Heater current	410 mA	Published nominal value

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate dissipation	2 W	Published maximum rating
Application	VHF frequency converter	Printed source application



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

1972 Philips Receiving Tubes

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

1972 PHILIPS RECEIVING TUBES

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	6.3 V	Nominal
HeaterCurrentNominal	410 mA	Nominal
Maximum Plate Voltage	300 V	—
Maximum Plate Dissipation	1.5 W	—
Maximum Cathode Current	25 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	8500 μ S	Typical
Amplification Factor	55	Typical

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	9000 ohm	Typical

1972 PHILIPS RECEIVING TUBES

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	6.3 V	Nominal
HeaterCurrentNominal	410 mA	Nominal
Maximum Plate Voltage	300 V	—
Maximum Screen Voltage	300 V	—
Maximum Plate Dissipation	2.5 W	—
Maximum Screen Dissipation	0.6 W	—
Maximum Cathode Current	30 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	7500 μ S	Typical
Plate Resistance	250000 ohm	Typical



TUBE TINKER
ELECTRON TUBE DATABASE

SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1975 RCA RC30

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

1975 RCA RC30

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For grid-resistor-bias operation*	1 M Ω	Published in approved ECF801 target datasheet entry; Section1
# Pulse duration must not exceed 15% of a horizontal scanning cycle (	10 microseconds	Published in approved ECF801 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Current 4.1 5.6 6.3	8 V	Published in approved ECF801 target datasheet entry; Section1
Peak Heater-Cathode 0.6 0.45 0.41	300 mA	Published in approved ECF801 target datasheet entry; Section1
Plate-Supply Voltage 600	600 V	Published in approved ECF801 target datasheet entry; Section1
DC Plate Voltage 140	275 V	Published in approved ECF801 target datasheet entry; Section1
Grid-No.2 (Screen-Grid) Supply Voltage	600 V	Published in approved ECF801 target datasheet entry; Section1
DC Grid-No.2 Voltage	275 V	Published in approved ECF801 target datasheet entry; Section1
DC Grid-No.1 (Control-Grid) Voltage	-50 V	Published in approved ECF801 target datasheet entry; Section1
Cathode Current 22	20 mA	Published in approved ECF801 target datasheet entry; Section1
Plate Dissipation 1.8	2.4 W	Published in approved ECF801 target datasheet entry; Section1
Grid-No.2 Input*	0.55 W	Published in approved ECF801 target datasheet entry; Section1
DC Plate Voltage 100	170 V	Published in approved ECF801 target datasheet entry; Section1
DC Grid-No.2 Voltage	120 V	Published in approved ECF801 target datasheet entry; Section1
DC Grid-No.1 Voltage -3	-1.2 V	Published in approved ECF801 target datasheet entry; Section1
Plate Resistance (Approx.)	0.35 MΩ	Published in approved ECF801 target datasheet entry; Section1
receivers to	50 V	Published in approved ECF801 target datasheet entry; Section1
to	0.5 W	Published in approved ECF801 target datasheet entry; Section1
is	0.36 W	Published in approved ECF801 target datasheet entry; Section1
Heater Voltage (ac/dc) 2.3 2.8 4	6.3 V	Published in approved ECF801 target datasheet entry; Section1
Heater Current 0.6 0.45 0.3	180 mA	Published in approved ECF801 target datasheet entry; Section1
Negative-bias value	50 V	Published in approved ECF801 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Positive-bias value	0 V	Published in approved ECF801 target datasheet entry; Section1
Average Cathode Current	22 mA	Published in approved ECF801 target datasheet entry; Section1
Plate Dissipation	2.5 W	Published in approved ECF801 target datasheet entry; Section1
Plate Voltage	135 V	Published in approved ECF801 target datasheet entry; Section1
Grid Voltage	-1 V	Published in approved ECF801 target datasheet entry; Section1
Plate Resistance (Approx.)	5400 Ω	Published in approved ECF801 target datasheet entry; Section1
Transconductance	15000 μS	Published in approved ECF801 target datasheet entry; Section1
Plate Current	11.5 mA	Published in approved ECF801 target datasheet entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current 15	10 mA	Published in approved ECF801 target datasheet entry; Section1
Grid-No.2 Current	3 mA	Published in approved ECF801 target datasheet entry; Section1
For fixed-bias operation 0.5	1 M Ω	Published in approved ECF801 target datasheet entry; Section1
For cathode-bias operation 0.5	2.2 M Ω	Published in approved ECF801 target datasheet entry; Section1
voltage to	100 V	Published in approved ECF801 target datasheet entry; Section1
Input Resistance*	275 Ω	Published in approved ECF801 target datasheet entry; Section1
Input Capacitance*	11.2 pF	Published in approved ECF801 target datasheet entry; Section1
Grid Voltage (Approx.) for transconductance of	150 μS	Published in approved ECF801 target datasheet entry; Section1
Grid Voltage (Approx.) for transconductance of	1500 μS	Published in approved ECF801 target datasheet entry; Section1
Grid Voltage (Approx.) for transconductance of 1500 /imhos	-2.5 V	Published in approved ECF801 target datasheet entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate	0.62 pF	Published in approved ECF801 target datasheet entry; Section1
Grid to Cathode, Heater, and Internal Shield	5 pF	Published in approved ECF801 target datasheet entry; Section1
Plate to Cathode, Heater, and Internal Shield	3.5 pF	Published in approved ECF801 target datasheet entry; Section1

1975 RCA RC30

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For grid-resistor-bias operation*	1 MΩ	Published in approved ECF801 target datasheet entry; Section2
# Pulse duration must not exceed 15% of a horizontal scanning cycle (	10 microseconds	Published in approved ECF801 target datasheet entry; Section2
Heater Current 4.1 5.6 6.3	8 V	Published in approved ECF801 target datasheet entry; Section2
Peak Heater-Cathode 0.6 0.45 0.41	300 mA	Published in approved ECF801 target datasheet entry; Section2
Plate-Supply Voltage 600	600 V	Published in approved ECF801 target datasheet entry; Section2
DC Plate Voltage 140	275 V	Published in approved ECF801 target datasheet entry; Section2
Grid-No.2 (Screen-Grid) Supply Voltage	600 V	Published in approved ECF801 target datasheet entry; Section2
DC Grid-No.2 Voltage	275 V	Published in approved ECF801 target datasheet entry; Section2
DC Grid-No.1 (Control-Grid) Voltage	-50 V	Published in approved ECF801 target datasheet entry; Section2
Cathode Current 22	20 mA	Published in approved ECF801 target datasheet entry; Section2
Plate Dissipation 1.8	2.4 W	Published in approved ECF801 target datasheet entry; Section2
Grid-No.2 Input*	0.55 W	Published in approved ECF801 target datasheet entry; Section2
DC Plate Voltage 100	170 V	Published in approved ECF801 target datasheet entry; Section2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Grid-No.2 Voltage	120 V	Published in approved ECF801 target datasheet entry; Section2
DC Grid-No.1 Voltage –3	-1.2 V	Published in approved ECF801 target datasheet entry; Section2
Plate Resistance (Approx.)	0.35 MΩ	Published in approved ECF801 target datasheet entry; Section2
receivers to	50 V	Published in approved ECF801 target datasheet entry; Section2
to	0.5 W	Published in approved ECF801 target datasheet entry; Section2
is	0.36 W	Published in approved ECF801 target datasheet entry; Section2
Heater Voltage (ac/dc) 2.3 2.8 4	6.3 V	Published in approved ECF801 target datasheet entry; Section2
Heater Current 0.6 0.45 0.3	180 mA	Published in approved ECF801 target datasheet entry; Section2
Negative-bias value	50 V	Published in approved ECF801 target datasheet entry; Section2
Positive-bias value	0 V	Published in approved ECF801 target datasheet entry; Section2
Average Cathode Current	22 mA	Published in approved ECF801 target datasheet entry; Section2
Plate Dissipation	2.5 W	Published in approved ECF801 target datasheet entry; Section2
Plate Voltage	135 V	Published in approved ECF801 target datasheet entry; Section2
Grid Voltage	-1 V	Published in approved ECF801 target datasheet entry; Section2
Plate Resistance (Approx.)	5400 Ω	Published in approved ECF801 target datasheet entry; Section2
Transconductan'*.e	15000 μS	Published in approved ECF801 target datasheet entry; Section2
Plate Current	11.5 mA	Published in approved ECF801 target datasheet entry; Section2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current 15	10 mA	Published in approved ECF801 target datasheet entry; Section2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.2 Current	3 mA	Published in approved ECF801 target datasheet entry; Section2
For fixed-bias operation 0.5	1 MΩ	Published in approved ECF801 target datasheet entry; Section2
For cathode-bias operation 0.5	2.2 MΩ	Published in approved ECF801 target datasheet entry; Section2
voltage to	100 V	Published in approved ECF801 target datasheet entry; Section2
Input Resistance*	275 Ω	Published in approved ECF801 target datasheet entry; Section2
Input Capacitance*	11.2 pF	Published in approved ECF801 target datasheet entry; Section2
Grid Voltage (Approx.) for transconductance of	150 μS	Published in approved ECF801 target datasheet entry; Section2
Grid Voltage (Approx.) for transconductance of	1500 μS	Published in approved ECF801 target datasheet entry; Section2
Grid Voltage (Approx.) for transconductance of 1500 /imhos	-2.5 V	Published in approved ECF801 target datasheet entry; Section2

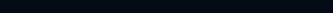
CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate	0.62 pF	Published in approved ECF801 target datasheet entry; Section2
Grid to Cathode, Heater, and Internal Shield	5 pF	Published in approved ECF801 target datasheet entry; Section2
Plate to Cathode, Heater, and Internal Shield	3.5 pF	Published in approved ECF801 target datasheet entry; Section2











SOURCE OPERATING CONDITIONS

1999 Philips E-Z

[SOURCE PDF](#)

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 V_e	6.3 V	Heater voltage V_e 6.3 V
Heater current I_ϕ	410 mA	Heater current I_ϕ 0.41 A

TUBE TINKER

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

[Catalog](#)[Tube types](#)[Full books](#)[Blog](#)[Feedback & corrections](#)

© 2026 Tube Tinker