

ELECTRONIC TUBE REFERENCE

5JW8

Voltage - Triode Pentode electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Combined medium-mu triode and sharp-cutoff pentode for television horizontal oscillator, multivibrator, frequency-control, and related amplifier circuits.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9AE	BASE PINS	9
NOMINAL HEATER	4.7 V / 600 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

9AE - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – 2P	B	P – Plate (Anode)	CONNECTED
PIN2 – 1G1	A	G1 – Control Grid	CONNECTED
PIN3 – 1G2	A	G2 – Screen Grid	CONNECTED
PIN4 – H	–	H – Heater	CONNECTED
PIN5 – H	–	H – Heater	CONNECTED
PIN6 – 1P	A	P – Plate (Anode)	CONNECTED
PIN7 – 1G3	A	G3 – Suppressor Grid	CONNECTED
PIN7 – 1S	A	IS – Internal Screen	CONNECTED
PIN7 – 1K	A	K – Cathode	CONNECTED
PIN8 – 2K	B	K – Cathode	CONNECTED
PIN9 – 2G1	B	G1 – Control Grid	CONNECTED

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	8500 Ω
TRANSCONDUCTANCE	0.0035 S
AMPLIFICATION FACTOR	70
MAXIMUM PLATE VOLTAGE	260 V
MAXIMUM PLATE DISSIPATION	1.4 W
MAXIMUM CATHODE CURRENT	10 mA
<i>Published ratings/characteristics promoted from supplied source; additional conditions retained in parameter table.</i>	

SECTION2 Pentode	
PLATE RESISTANCE	200000 Ω
TRANSCONDUCTANCE	0.0056 S
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	1.2 W
MAXIMUM SCREEN DISSIPATION	0.8 W
MAXIMUM CATHODE CURRENT	60 mA
<i>Published ratings/characteristics promoted from supplied source; additional conditions retained in parameter table.</i>	

Medium-mu triode plus sharp-cutoff pentode used as a horizontal oscillator and frequency-control tube in television receivers.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1964 RMA EIA

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

1964 RMA EIA

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	4.7 V	—
Heater Current	600 mA	—
EquivalentElectricalType	6JW8	ExceptHeater
Application	Horizontal oscillator and AFC	Television

1964 RMA EIA

Section 2 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
EquivalentElectricalType	6JW8	ExceptHeater



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
Heater Voltage (ac/dc) 4.7 6.3 6	9 V	Published in approved ECF802 target datasheet entry; Section1
Heater Current 0.6 0.43 0.45	300 mA	Published in approved ECF802 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Supply Voltage 550	650 V	Published in approved ECF802 target datasheet entry; Section1
Plate Voltage 260	250 V	Published in approved ECF802 target datasheet entry; Section1
Grid-No.2 Voltage	250 V	Published in approved ECF802 target datasheet entry; Section1
Peak Cathode Current*	60 mA	Published in approved ECF802 target datasheet entry; Section1
Cathode Current 10	15 mA	Published in approved ECF802 target datasheet entry; Section1
Plate Dissipation 1.4	1.2 W	Published in approved ECF802 target datasheet entry; Section1
Grid-No.2 Input	0.8 W	Published in approved ECF802 target datasheet entry; Section1
Input Impedance at 60 Hz 50	300 kΩ	Published in approved ECF802 target datasheet entry; Section1
Plate Voltage 200	100 V	Published in approved ECF802 target datasheet entry; Section1
For grid current of 10 /tA	10 mA	Published in approved ECF802 target datasheet entry; Section1
Grid-No.2 Current for grid-No.1 voltage of	0 V	Published in approved ECF802 target datasheet entry; Section1
–	3.5 mA	Published in approved ECF802 target datasheet entry; Section1
For grid-No.1 current of +0.3 iiK –1.3	-1.3 V	Published in approved ECF802 target datasheet entry; Section1
For plate and grid-No.2 voltage of	200 V	Published in approved ECF802 target datasheet entry; Section1
and plate current of 10 /lA –	-16 V	Published in approved ECF802 target datasheet entry; Section1
For fixed-bias operation	0.56 MΩ	Published in approved ECF802 target datasheet entry; Section1
For cathode-bias operation 3	1 MΩ	Published in approved ECF802 target datasheet entry; Section1
• With a maximum duty factor of 0.30 and maximum pulse duration of	30 microseconds	Published in approved ECF802 target datasheet entry; Section1
Heater Voltage (ac/dc) 6.3 12.7 16.8 24.2	25.2 V	Published in approved ECF802 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Current 1.2 0.6 0.45 0.315	300 mA	Published in approved ECF802 target datasheet entry; Section1
Heater Warm-up Time . 11 11	11 seconds	Published in approved ECF802 target datasheet entry; Section1
Plate Voltage 150 45	120 V	Published in approved ECF802 target datasheet entry; Section1
Grid-No.2 (Screen-Grid) Voltage 110	110 V	Published in approved ECF802 target datasheet entry; Section1
Grid-No.1 (Control-Grid) Voltage -6 0	-8 V	Published in approved ECF802 target datasheet entry; Section1
Plate Resistance (Approx.) 8500	11700 Ω	Published in approved ECF802 target datasheet entry; Section1
Transconductance 2350	7100 μS	Published in approved ECF802 target datasheet entry; Section1
Plate Current 5.5 122	46 mA	Published in approved ECF802 target datasheet entry; Section1
16.5"	3.5 mA	Published in approved ECF802 target datasheet entry; Section1
of 10 hK	-10 V	Published in approved ECF802 target datasheet entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.1 (Control-Grid) Voltage -2	1 V	Published in approved ECF802 target datasheet entry; Section1
Input Resistance 0.2	0.4 MΩ	Published in approved ECF802 target datasheet entry; Section1
Transconductance 3500	5600 μS	Published in approved ECF802 target datasheet entry; Section1
Plate Current 3.5	6 mA	Published in approved ECF802 target datasheet entry; Section1
Grid-No.2 Current	1.7 mA	Published in approved ECF802 target datasheet entry; Section1
For grid-No.1 voltage of	0 V	Published in approved ECF802 target datasheet entry; Section1

1975 RCA RC30

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) 4.7 6.3 6	9 V	Published in approved ECF802 target datasheet entry; Section2
Heater Current 0.6 0.43 0.45	300 mA	Published in approved ECF802 target datasheet entry; Section2
Plate Supply Voltage 550	650 V	Published in approved ECF802 target datasheet entry; Section2
Plate Voltage 260	250 V	Published in approved ECF802 target datasheet entry; Section2
Grid-No.2 Voltage	250 V	Published in approved ECF802 target datasheet entry; Section2
Peak Cathode Current*	60 mA	Published in approved ECF802 target datasheet entry; Section2
Cathode Current 10	15 mA	Published in approved ECF802 target datasheet entry; Section2
Plate Dissipation 1.4	1.2 W	Published in approved ECF802 target datasheet entry; Section2
Grid-No.2 Input	0.8 W	Published in approved ECF802 target datasheet entry; Section2
Input Impedance at 60 Hz 50	300 kΩ	Published in approved ECF802 target datasheet entry; Section2
Plate Voltage 200	100 V	Published in approved ECF802 target datasheet entry; Section2
For grid current of 10 /tA	10 mA	Published in approved ECF802 target datasheet entry; Section2
Grid-No.2 Current for grid-No.1 voltage of	0 V	Published in approved ECF802 target datasheet entry; Section2
–	3.5 mA	Published in approved ECF802 target datasheet entry; Section2
For grid-No.1 current of +0.3 iiK –1.3	-1.3 V	Published in approved ECF802 target datasheet entry; Section2
For plate and grid-No.2 voltage of	200 V	Published in approved ECF802 target datasheet entry; Section2
and plate current of 10 /lA –	-16 V	Published in approved ECF802 target datasheet entry; Section2
For fixed-bias operation	0.56 MΩ	Published in approved ECF802 target datasheet entry; Section2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For cathode-bias operation 3	1 MΩ	Published in approved ECF802 target datasheet entry; Section2
• With a maximum duty factor of 0.30 and maximum pulse duration of	30 microseconds	Published in approved ECF802 target datasheet entry; Section2
Heater Voltage (ac/dc) 6.3 12.7 16.8 24.2	25.2 V	Published in approved ECF802 target datasheet entry; Section2
Heater Current 1.2 0.6 0.45 0.315	300 mA	Published in approved ECF802 target datasheet entry; Section2
Heater Warm-up Time . 11 11	11 seconds	Published in approved ECF802 target datasheet entry; Section2
Plate Voltage 150 45	120 V	Published in approved ECF802 target datasheet entry; Section2
Grid-No.2 (Screen-Grid) Voltage 110	110 V	Published in approved ECF802 target datasheet entry; Section2
Grid-No.1 (Control-Grid) Voltage -6 0	-8 V	Published in approved ECF802 target datasheet entry; Section2
Plate Resistance (Approx.) 8500	11700 Ω	Published in approved ECF802 target datasheet entry; Section2
Transconductance 2350	7100 μS	Published in approved ECF802 target datasheet entry; Section2
Plate Current 5.5 122	46 mA	Published in approved ECF802 target datasheet entry; Section2
16.5"	3.5 mA	Published in approved ECF802 target datasheet entry; Section2
of 10 hK	-10 V	Published in approved ECF802 target datasheet entry; Section2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.1 (Control-Grid) Voltage -2	1 V	Published in approved ECF802 target datasheet entry; Section2
Input Resistance 0.2	0.4 MΩ	Published in approved ECF802 target datasheet entry; Section2
Transconductance 3500	5600 μS	Published in approved ECF802 target datasheet entry; Section2
Plate Current 3.5	6 mA	Published in approved ECF802 target datasheet entry; Section2
Grid-No.2 Current	1.7 mA	Published in approved ECF802 target datasheet entry; Section2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For grid-No.1 voltage of	0 V	Published in approved ECF802 target datasheet entry; Section2

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