

ELECTRONIC TUBE REFERENCE

6KZ8

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Medium-mu triode and sharp-cutoff pentode used together as oscillator and mixer in VHF television receivers.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9FZ	BASE PINS	9
NOMINAL HEATER	6.3 V / 450 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

9FZ - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1	A	P – Plate (Anode)	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	K – Cathode	CONNECTED
PIN9	A	G1 – Control Grid	CONNECTED

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	5400 Ω
TRANSCONDUCTANCE	0.0085 S
AMPLIFICATION FACTOR	46
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	2.5 W
<i>Representative electrical section from supplied RCA data sheet.</i>	

SECTION2 Pentode	
PLATE RESISTANCE	200000 Ω
TRANSCONDUCTANCE	0.0075 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	2.5 W
MAXIMUM SCREEN DISSIPATION	0.55 W
<i>Representative electrical section from supplied RCA data sheet.</i>	

Medium-mu triode and sharp-cutoff pentode for combined VHF television oscillator and mixer service. Explicit heater variant/co-designation of 9KZ8 in the approved source.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1950 Sylvania

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

1950 SYLVANIA

Section 1 · Triode

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Service	VHF oscillator and mixer	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1965 Westinghouse Data Book

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

1965 WESTINGHOUSE DATA BOOK

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	450 mA	—
Grid-Plate Capacitance	1.6 pF	—
Input Capacitance	3.2 pF	—
Output Capacitance	0.9 pF	—

1965 WESTINGHOUSE DATA BOOK

Section 2 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-Plate Capacitance	0.01 pF	—
Input Capacitance	5.5 pF	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Output Capacitance	3.4 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Screen Supply Voltage	330 V	—
Maximum Screen Dissipation	0.55 W	—


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1971 RCA HB3 Binder 5 of 7

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

1971 RCA HB3 BINDER 5 OF 7

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage nominal	6.3 V	—
Heater current	450 mA	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC)	6.3 A	Published table column
Current	0 mA	Published table column
Warm-up time (Average)	11 s	Published source row
Plate resistance	5400 ohm	Promoted field corroboration
Transconductance	8500 μS	Promoted field corroboration
Amplification factor	46	Promoted field corroboration

1971 RCA HB3 BINDER 5 OF 7

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage nominal	6.3 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater current	450 mA	—
Plate Voltage	330 V	Published source row
Plate Voltage (value 2)	330 V	Published source row
Grid-No	2	Published source row
Supply Voltage	330 V	Published source row
Grid-No	2	Published source row
Grid-No	1	Published source row
Plate Dissipation	2 W	Published source row
Plate Dissipation (value 2)	5 W	Published source row
Plate Dissipation (value 3)	2.5 W	Published source row
Grid-No	2	Published source row
For grid-No	2	Published source row
For grid-No	2	Published source row
Published electrical value	330	Published source row
Published electrical value (value 2)	2	Published source row

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC)	6.3 A	Published table column
Current	450 A	Published table column
Warm-up time (Average)	11 s	Published source row
Plate Voltage	125 V	Published source row
Plate Voltage (value 2)	125 V	Published source row
Grid-No	2 V	Published source row
Grid-No (value 2)	125 V	Published source row
Grid-No	1 V	Published source row
Grid-No (value 2)	-1 V	Published source row
Grid-No (value 3)	-1 V	Published source row
Plate Resistance (Approx)	5400 ohm	Published source row
Plate Resistance (Approx) (value 2)	200000 ohm	Published source row
Transconductance	8500 μ S	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance (value 2)	7500 μ S	Published source row
Plate Current	13.5 mA	Published source row
Plate Current (value 2)	12 mA	Published source row
Grid-No	2 mA	Published source row
Grid-No (value 2)	4 mA	Published source row
Grid No	1	Published source row
Cathode, ~'	3	Published source row
Cathode, ~' (value 2)	2	Published source row



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
Heater Warm-up Time (Average)	11 s	Other;PublishedValue1
Heater Warm-up Time (Average)	11 s	Other;PublishedValue2
Heater Warm-up Time (Average)	11 s	Other;PublishedValue3
Peak value	200 V	Other;PublishedValue1
Peak value	200 V	Other;PublishedValue2
Peak value	200 V	Other;PublishedValue3
Average value	100 V	Other;PublishedValue1
Average value	100 V	Other;PublishedValue2
Average value	100 V	Other;PublishedValue3
Grid to Plate	1.6 pF	Other

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Triode Cathode, Pentode Cathode, Heater, Pentode Grid	3 pF	Other;PublishedValue1
Grid to Triode Cathode, Pentode Cathode, Heater, Pentode Grid	3.2 pF	Other;PublishedValue2
Plate to Triode Cathode, Pentode Cathode, Heater, Pentode Grid	3 pF	Other;PublishedValue1
Plate to Triode Cathode, Pentode Cathode, Heater, Pentode Grid	1.8 pF	Other;PublishedValue2
Grid No.1 to Plate	0.01 pF	Other
Internal Shield	5.5 pF	Other
Internal Shield	3.4 pF	Other
Heater to Cathode (Each Unit)	3.2 pF	Other
Plate Voltage	330 V	MaximumRating;PublishedValue1
Plate Voltage	330 V	MaximumRating;PublishedValue2
Grid-No	2 V	MaximumRating;PublishedValue1
Grid-No	330 V	MaximumRating;PublishedValue2
Grid No.1 (Control-Grid) Voltage, Positive-bias value	0 V	MaximumRating;PublishedValue1
Grid No.1 (Control-Grid) Voltage, Positive-bias value	0 V	MaximumRating;PublishedValue2
Plate Dissipation	2.5 W	MaximumRating;PublishedValue1
Plate Dissipation	2.5 W	MaximumRating;PublishedValue2
For grid-No	2 V	MaximumRating;PublishedValue1
For grid-No	165 V	MaximumRating;PublishedValue2
For grid-No	0.55 V	MaximumRating;PublishedValue3
For grid-No	2 V	MaximumRating;PublishedValue1
For grid-No	165 V	MaximumRating;PublishedValue2
For grid-No	330 V	MaximumRating;PublishedValue3
For grid-No	300 V	MaximumRating;PublishedValue4
Maximum Plate Voltage	330 V	Section1
Maximum Plate Dissipation	2.5 W	Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	125 V	Characteristic;PublishedValue1
Plate Voltage	125 V	Characteristic;PublishedValue2
Grid-No	1 V	Characteristic;PublishedValue1
Grid-No	-1 V	Characteristic;PublishedValue2
Plate Resistance (Approx.)	5400 ohm	Characteristic;PublishedValue1
Plate Resistance (Approx.)	200000 ohm	Characteristic;PublishedValue2
Plate Current	13.5 mA	Characteristic;PublishedValue1
Plate Current	12 mA	Characteristic;PublishedValue2
Grid-No	2 mA	Characteristic;PublishedValue1
Grid-No	4 mA	Characteristic;PublishedValue2
Grid-No.1 Voltage (Approx.) for plate current of	10 V	Characteristic;PublishedValue1
Grid-No.1 Voltage (Approx.) for plate current of	-8 V	Characteristic;PublishedValue2
Grid-No.1 Voltage (Approx.) for plate current of	-8 V	Characteristic;PublishedValue3
Plate Resistance	5400 ohm	Section1
Transconductance	8500 uS	Section1
Amplification Factor	46	Section1

1975 RCA RC30

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	330 V	Section2
Maximum Screen Voltage	330 V	Section2
Maximum Plate Dissipation	2.5 W	Section2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	200000 ohm	Section2
Transconductance	7500 uS	Section2



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