

ELECTRONIC TUBE REFERENCE

2CY5

Voltage - Tetrode electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TETRODE

VHF tetrode designed as the RF amplifier in television tuners, providing high-frequency gain with controlled cutoff characteristics for front-end receiver service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7EW	BASE PINS	7
NOMINAL HEATER	2.4 V / 600 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

7EW - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Tetrode	
PLATE RESISTANCE	125000 Ω
TRANSCONDUCTANCE	0.008 S
MAXIMUM PLATE VOLTAGE	180 V
MAXIMUM SCREEN VOLTAGE	180 V
MAXIMUM PLATE DISSIPATION	2 W
MAXIMUM SCREEN DISSIPATION	0.5 W
MAXIMUM CATHODE CURRENT	20 mA
<i>Reference/heater-variant sheet; no unprinted electrical ratings were imported from the referenced 6-series datasheet.</i>	

Sharp-cutoff tetrode used as an RF amplifier in VHF television tuners.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1961 Tung Sol

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

1961 TUNG SOL

Section 1 · Tetrode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid To Plate Capacitance	0.03 pF	—
Input Capacitance	4.5 pF	—
Output Capacitance	3 pF	—

SOURCE OPERATING CONDITIONS

1965 Sylvania Electronic Tubes Vol3

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

1965 SYLVANIA ELECTRONIC TUBES VOL3

Section 1 · Tetrode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	125 V	—
Screen-grid voltage	80 V	—
Grid 1 voltage	-1 V	—
Plate current	10 mA	—
Screen-grid current	1.4 mA	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	125000 Ohm	—
Transconductance	8000 uS	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Control-grid cutoff voltage	-6 V	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.03 pF	Shielded
Input capacitance	4.4 pF	Shielded
Output capacitance	2.8 pF	Shielded



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.

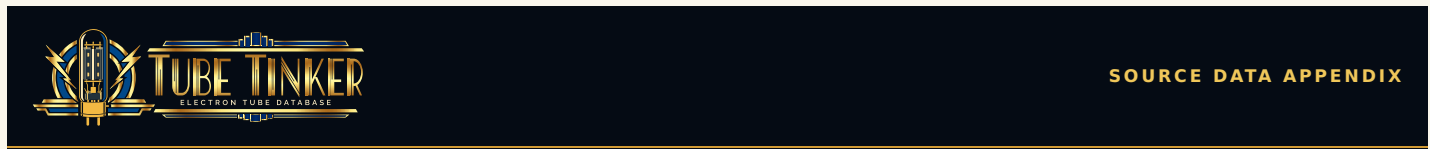
1965 WESTINGHOUSE DATA BOOK

Section 1 · Tetrode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	2.4 V	—
Heater Current	600 mA	—
Grid-Plate Capacitance	0.03 pF	Maximum; Shielded
Input Capacitance	4.4 pF	Shielded
Output Capacitance	2.8 pF	Shielded

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	180 V	—
Maximum Screen Supply Voltage	180 V	—
Maximum Plate Dissipation	2 W	—
Maximum Screen Dissipation	0.5 W	—
Maximum Cathode Current	20 mA	—
Plate Voltage	125 V	—
Screen Voltage	80 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid Voltage	-1 V	—
Plate Current	10 mA	—
Screen Current	1.4 mA	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1966 Tung Sol Electronic Tubes 1 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 1 OF 4

Section 1 · Tetrode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GRID #	0.03 MMF	Capacitances GRID #1 TO PLATE 0.03 μ pf

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
MAXIMUM CATHODE CURRENT	20 mA	Maximum Ratings MAXIMUM CATHODE CURRENT 20 MA.
PLATE VOLTAGE	125 V	Typical Operating Conditions PLATE VOLTAGE 125 voLTs
GRID #	-1 V	Typical Operating Conditions GRID #1 VOLTAGE -1 VOLTS
PLATE RESISTANCE 0	1 Mohm	Typical Operating Conditions PLATE RESISTANCE 0.1 MEGOHM
TRANSCONDUCTANCE	0 MMHOS	Typical Operating Conditions TRANSCONDUCTANCE 8 000 μ MHOS
GRID #	1.5 mA	Typical Operating Conditions GRID #2 CURRENT 1.5 MA.



1968 General Electric Co

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

1968 GENERAL ELECTRIC CO
Section 1 · Tetrode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltageNominal	2.4 V	—
HeaterOrFilamentCurrentNominal	600 mA	—



SOURCE DATA APPENDIX

1971 RCA HB3 Binder 4 of 7

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

1971 RCA HB3 BINDER 4 OF 7
Section 1 · Tetrode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	2.4 V	—
Heater current	600 mA	—
Heater warm-up time	11 s	—
Plate voltage	125 V	ClassA
Screen voltage	80 V	ClassA
Grid voltage	-1 V	ClassA
Plate current	10 mA	ClassA
Screen current	1.4 mA	ClassA
Maximum plate voltage	180 V	—
Maximum screen voltage	180 V	—
Maximum plate dissipation	2 W	—

Characteristic		
Parameter	Published Value	Condition / Note
Plate resistance	125000 ohm	ClassA
Transconductance	8000 uS	ClassA

Capacitance		
Parameter	Published Value	Condition / Note
Grid-to-plate capacitance	0.03 pF	—
Input capacitance	4.4 pF	—
Output capacitance	2.74 pF	—



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 · Tetrode

Other		
Parameter	Published Value	Condition / Note
Heater Voltage (ac/dc) 2.4 2.9	6.3 V	Published in approved target datasheet entry
Heater Current 0.6 0.45	200 mA	Published in approved target datasheet entry
Heater Warm-up Time (Average) 11	11 seconds	Published in approved target datasheet entry
Plate Voltage	180 V	Published in approved target datasheet entry
Grid-No.2 (Screen-Grid) Supply Voltage	180 V	Published in approved target datasheet entry
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0 V	Published in approved target datasheet entry
Cathode Current	20 mA	Published in approved target datasheet entry
Plate Dissipation	2 W	Published in approved target datasheet entry
For grid-No.2 voltages up to	90 V	Published in approved target datasheet entry
For grid-No.2 voltages up to 90 volts	0.5 W	Published in approved target datasheet entry

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For grid-No.2 voltages between 90 and	180 V	Published in approved target datasheet entry
Grid-No.1 Voltage (Approx.) for plate current of 20 /1A	-6 V	Published in approved target datasheet entry
Grid-No.1-Circuit Resistance	0.6 Mohm	Published in approved target datasheet entry

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.1 to Plate	0.03 pF	Published in approved target datasheet entry
Grid-No.1 to Cathode, Heater, Grid No.2 and Internal Shield	4.5 pF	Published in approved target datasheet entry
Plate to Cathode, Heater, Grid No.2, and Internal Shield	3 pF	Published in approved target datasheet entry

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	125 V	Published in approved target datasheet entry
Plate Current	10 mA	Published in approved target datasheet entry
Grid-No.2 Current	1.5 mA	Published in approved target datasheet entry

TUBE TINKER

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

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