

ELECTRONIC TUBE REFERENCE

15CW5

Power - TV Vertical Output electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Power pentode designed for vertical-deflection amplifier service in color and black-and-white television receivers. It provides the output current and voltage swing required by the vertical scanning system.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9CV	BASE PINS	9
NOMINAL HEATER	15 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

9CV - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	30000 Ω
TRANSCONDUCTANCE	0.0113 S
AMPLIFICATION FACTOR	8
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	200 V
MAXIMUM PLATE DISSIPATION	12 W
MAXIMUM SCREEN DISSIPATION	2.5 W
MAXIMUM CATHODE CURRENT	100 mA
<i>beam power</i>	

Power pentode used for vertical-deflection amplifier service in color and black-and-white television receivers.



SOURCE OPERATING CONDITIONS

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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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Service	Audio output; phase inverter and push-pull	—
Heater Warmup Time	11 s	—



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1966 Tung Sol Electronic Tubes 3 of 4

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1966 TUNG SOL ELECTRONIC TUBES 3 OF 4

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage without plate current	550 V	—
Screen voltage without current	550 V	—
Push-pull power output	13.5 W	PushPull
Maximum plate voltage	250 V	PromotedValue
Maximum screen voltage	200 V	PromotedValue
Maximum plate dissipation	12 W	PromotedValue
Maximum screen dissipation	1.75 W	PromotedValue
Maximum cathode current	100 mA	PromotedValue

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical plate voltage	200 V	ClassA
Typical screen voltage	100 V	ClassA
Typical plate current	43 mA	ClassA
Plate resistance	23000 ohm	PromotedValue
Transconductance	0.009 A/V	PromotedValue

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.3 pF	—
Input capacitance	11 pF	—
Output capacitance	7 pF	—



SOURCE DATA APPENDIX

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1971 RCA HB3 Binder 5 of 7

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1971 RCA HB3 BINDER 5 OF 7

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	250 V	Inherited from explicitly referenced 6CW5 parent except heater data.
Maximum Screen Voltage	250 V	Inherited from explicitly referenced 6CW5 parent except heater data.
Plate Dissipation	12 W	Inherited from explicitly referenced 6CW5 parent except heater data.
Screen Dissipation	2.5 W	Inherited from explicitly referenced 6CW5 parent except heater data.

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	30000 Ω	Inherited from explicitly referenced 6CW5 parent except heater data.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	11300 μ S	Inherited from explicitly referenced 6CW5 parent except heater data.



SOURCE DATA APPENDIX

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1975 RCA RC30

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1975 RCA RC30

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) 8 10.6	15 V	Published in approved XL86 target datasheet entry; Section1
Heater Current 0.76 0.6 0.45	300 mA	Published in approved XL86 target datasheet entry; Section1
Plate Supply Voltage	600 V	Published in approved XL86 target datasheet entry; Section1
Grid-No.2 Voltage	220 V	Published in approved XL86 target datasheet entry; Section1
Grid-No.2 (Screen-Grid) Supply Voltage	600 V	Published in approved XL86 target datasheet entry; Section1
Grid-No.2 Input	2.1 W	Published in approved XL86 target datasheet entry; Section1
Peak Grid-No.2 Input	7 W	Published in approved XL86 target datasheet entry; Section1
Plate Voltage	170 V	Published in approved XL86 target datasheet entry; Section1
Grid-No.1-Circuit Resistance	1 M Ω	Published in approved XL86 target datasheet entry; Section1
Plate Voltage	275 V	Published in approved XL86 target datasheet entry; Section1
Peak Positive-Pulse Plate Voltage#	2200 V	Published in approved XL86 target datasheet entry; Section1
Grid-No.2 Voltage	275 V	Published in approved XL86 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Negative-Pulse Grid-No.1 Voltage	250 V	Published in approved XL86 target datasheet entry; Section1
Peak Cathode Current	240 mA	Published in approved XL86 target datasheet entry; Section1
Average Cathode Current	110 mA	Published in approved XL86 target datasheet entry; Section1
Plate Dissipation	12 W	Published in approved XL86 target datasheet entry; Section1
Grid-No.1-Circuit Resistance	2.2 MΩ	Published in approved XL86 target datasheet entry; Section1
# Pulse duration must not exceed 6 r/, of a vertical scanning cycle (	1.2 milliseconds	Published in approved XL86 target datasheet entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to Plate	0.6 pF	Published in approved XL86 target datasheet entry; Section1
Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3	13 pF	Published in approved XL86 target datasheet entry; Section1
Plate to Cathode, Heater, Grid No.2, and Grid No.3	6.8 pF	Published in approved XL86 target datasheet entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.2 Voltage	170 V	Published in approved XL86 target datasheet entry; Section1
Grid-No.1 (Control-Grid) Voltage	12.5 V	Published in approved XL86 target datasheet entry; Section1
Plate Resistance	26000 Ω	Published in approved XL86 target datasheet entry; Section1
Transconductance	11000 μS	Published in approved XL86 target datasheet entry; Section1
Plate Current	70 mA	Published in approved XL86 target datasheet entry; Section1
Grid-No.2 Current	3.5 mA	Published in approved XL86 target datasheet entry; Section1

SOURCE OPERATING CONDITIONS

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1999 Philips 0-D

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

1999 PHILIPS 0-D

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage without plate current	600 V	ClassA;ClassAB;AudioOutput
Grid 2 voltage without current	600 V	ClassA;ClassAB;AudioOutput
Grid 2 peak dissipation	7 W	ClassA;ClassAB;AudioOutput
Vertical-deflection maximum plate voltage	275 V	TVVerticalDeflection
Peak positive-pulse plate voltage	2200 V	TVVerticalDeflection;PulseRated
Vertical-deflection maximum grid 2 voltage	275 V	TVVerticalDeflection
Peak negative-pulse grid 1 voltage	250 V	TVVerticalDeflection;PulseRated
Peak cathode current	240 mA	TVVerticalDeflection
Average cathode current	110 mA	TVVerticalDeflection
Vertical-deflection plate dissipation	12 W	TVVerticalDeflection
Maximum DC heater-cathode voltage	220 V	CathodePositiveOrNegative
Maximum peak heater-cathode voltage	330 V	CathodePositiveOrNegative
Maximum grid 1 circuit resistance AF amplifier	1 Mohm	AudioOutput
Maximum grid 1 circuit resistance deflection amplifier	2.2 Mohm	TVVerticalDeflection
Maximum heater-cathode circuit resistance	20000 ohm	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical plate voltage	170 V	—
Typical grid 2 voltage	170 V	—
Typical grid 1 voltage	-12.5 V	—
Typical plate current	70 mA	—
Typical grid 2 current	3.5 mA	—
Transconductance	11000 μ S	—
Plate resistance	26000 ohm	—
Grid 2 to grid 1 amplification factor	8	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid 1 input capacitance	11 pF	—
Plate output capacitance	6.8 pF	—
Plate-grid 1 capacitance maximum	0.6 pF	—
Grid 1-heater capacitance maximum	0.25 pF	—