

ELECTRONIC TUBE REFERENCE

6EH5

Power - Pentode Single (NOT beam) (under 10W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Power pentode designed for the audio-output stage of television receivers. Its compact construction provides low-frequency output power for driving the receiver loudspeaker.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7CV	BASE PINS	9
NOMINAL HEATER	6.3 V / 1.2 A	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

7CV - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	11000 Ω
TRANSCONDUCTANCE	0.0146 S
MAXIMUM PLATE VOLTAGE	150 V
MAXIMUM SCREEN VOLTAGE	130 V
MAXIMUM PLATE DISSIPATION	5.5 W
MAXIMUM SCREEN DISSIPATION	2 W
MAXIMUM CATHODE CURRENT	65 mA
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
WARM-UP TIME	11 s
<i>Published promoted fields populated from the printed semantic headings.</i>	

Power pentode used in the audio output stage of television receivers. It is an explicit heater variant/co-designation in 25EH5.pdf.

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 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage. 6.3 12.6 25 50 Volts	50 V	Heater Voltage. 6.3 12.6 25 50 Volts
Heater Current. ... 1200 600 300 150 Ma	150 mA	Heater Current. ... 1200 600 300 150 Ma
Plate Voltage. 135 Volts	135 V	Plate Voltage. 135 Volts
Grid No. 2 Voltage. 117 Volts	117 V	Grid No. 2 Voltage. 117 Volts
Grid No. 1 Voltage. 0 Volts	0 V	Grid No. 1 Voltage. 0 Volts
Plate Dissipation. 5 Watts	5 W	Plate Dissipation. 5 Watts
Grid No. 2 Dissipation. 1.75 Watts	1.75 W	Grid No. 2 Dissipation. 1.75 Watts
Grid No. 2 Voltage. 115 Voits	2 V	Grid No. 2 Voltage. 115 Voits
Peak AF Grid No. 1 Voltage. 3 Volts	3 V	Peak AF Grid No. 1 Voltage. 3 Volts
Zero-Signal Plate Current. 42 Ma	42 mA	Zero-Signal Plate Current. 42 Ma
Zero Signal Grid No. 2 Current. 11.5 Ma	11.5 mA	Zero Signal Grid No. 2 Current. 11.5 Ma

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance. 14,600 umhos	14.6 umhos	Transconductance. 14,600 umhos
Plate Resistance (approx.). couireininon.. 11,000 Ohms	11 Ohms	Plate Resistance (approx.). couireininon.. 11,000 Ohms
Load Resistance. 3000 Ohms	3000 Ohms	Load Resistance. 3000 Ohms

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Signai Plate Current. 42 Ma	42 mA	Maximum Signai Plate Current. 42 Ma
Maximum Signal Grid No. 2 Current. 14.5 Ma	14.5 mA	Maximum Signal Grid No. 2 Current. 14.5 Ma
Maximum Signal Power Output. e 1.4 Watts	1.4 W	Maximum Signal Power Output. e 1.4 Watts



SOURCE DATA APPENDIX

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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical plate voltage	110 V	ClassA
Typical screen voltage	115 V	ClassA
Zero-signal screen current	11.5 mA	ClassA
Maximum-signal screen current	14.5 mA	ClassA
Power output	1.4 W	ClassA

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	14600 μ S	—

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Audio output amplifier	—


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1966 Tung Sol Electronic Tubes 2 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 2 OF 4

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply voltage	110 V	ClassA1;AudioOutput
Grid 2 supply voltage	115 V	ClassA1;AudioOutput
Plate current	42 mA	ClassA1;AudioOutput
Grid 2 current	11.5 mA	ClassA1;AudioOutput
Load resistance	3000 ohm	ClassA1;AudioOutput
Signal power output	1.4 W	ClassA1;AudioOutput


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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater-Cathode Voltage	1.2 A	Other;PublishedValue1
Heater-Cathode Voltage	300 mA	Other;PublishedValue2
Heater-Cathode Voltage	150 mA	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
Plate Voltage	150 V	MaximumRating
Grid-No	2 V	MaximumRating;PublishedValue1
Grid-No	130 V	MaximumRating;PublishedValue2
Plate Dissipation	5.5 W	MaximumRating
Grid-No	2 W	MaximumRating;PublishedValue1
Grid-No	2 W	MaximumRating;PublishedValue2
Plate Supply Voltage	110 V	TypicalOperation
Grid-No	2 V	TypicalOperation;PublishedValue1
Grid-No	115 V	TypicalOperation;PublishedValue2
Cathode-Bias Resistor	62 ohm	TypicalOperation
Peak AF Grid-No	1 V	TypicalOperation
Zero-Signal Plate Current	42 mA	TypicalOperation
Maximum-Signal Plate Current	42 mA	TypicalOperation
Zero-Signal Grid-No	2 mA	TypicalOperation;PublishedValue1
Zero-Signal Grid-No	11.5 mA	TypicalOperation;PublishedValue2
Maximum-Signal Grid-No	2 mA	TypicalOperation;PublishedValue1
Maximum-Signal Grid-No	14.5 mA	TypicalOperation;PublishedValue2
Plate Resistance (Apnrox.)	11000 ohm	TypicalOperation
Transconductance	14600 uS	TypicalOperation
Load Resistance	3000 ohm	TypicalOperation
TotalHarmonic Distortion	7 %	TypicalOperation

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum-Signal Power Output	1.4 W	TypicalOperation
For fixed-bias operation	0.1 megohm	TypicalOperation
For cathode-bias operation	0.5 megohm	TypicalOperation
Plate Supply Voltage	140 V	TypicalOperation
Grid-No	2 V	TypicalOperation;PublishedValue1
Grid-No	120 V	TypicalOperation;PublishedValue2
Cathode-Bias Resistor	68 ohm	TypicalOperation
Peak AF Grid-No.1 Voltage	9.4 V	TypicalOperation
Zero-Signal Plate Current	47 mA	TypicalOperation
Maximum-Signal Plate Current	51 mA	TypicalOperation
Zero-Signal Grid-No	2 mA	TypicalOperation;PublishedValue1
Zero-Signal Grid-No	11 mA	TypicalOperation;PublishedValue2
Maximum-Signal Grid-No	2 mA	TypicalOperation;PublishedValue1
Maximum-Signal Grid-No	17.7 mA	TypicalOperation;PublishedValue2
Effective Load Resistance (Plate-to-plate)	6000 ohm	TypicalOperation
Total Harmonic Distortion	5 %	TypicalOperation
Maximum-Signal Power Output	3.8 W	TypicalOperation
For fixed-bias operation	0.1 megohm	MaximumCircuitValue
Maximum Plate Voltage	110 V	Section1;Promoted
Maximum Screen Voltage	130 V	Section1;Promoted
Maximum Plate Dissipation	5.5 W	Section1;Promoted
Maximum Screen Dissipation	2 W	Section1;Promoted

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to Plate	0.65 pF	Capacitance
Grid No.1 to Cathode, Heater. Grid No	2 pF	Capacitance;PublishedValue1
Grid No.1 to Cathode, Heater. Grid No	3 pF	Capacitance;PublishedValue2
Grid No.1 to Cathode, Heater. Grid No	17 pF	Capacitance;PublishedValue3
Plate to Cathode. Heater, Grid No	2 pF	Capacitance;PublishedValue1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate to Cathode. Heater, Grid No	3 pF	Capacitance;PublishedValue2
Plate to Cathode. Heater, Grid No	9 pF	Capacitance;PublishedValue3

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	11000 ohm	Section1;Promoted
Transconductance	14600 uS	Section1;Promoted