

ELECTRONIC TUBE REFERENCE

25EH5

Power - Beam Single (NOT sweep) (under 10W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
BEAMPOWER

Beam-power pentode used in television-receiver audio-output stages, providing compact power amplification with heater characteristics suited to series-string equipment.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7CV	BASE PINS	7
NOMINAL HEATER	25 V / 300 mA	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

SECTION 0 Beam Power	
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	1.75 W
<i>Reference/equivalence-only sparse-source exception: identical to 50EH5 except heater characteristics; electrical tables not reproduced.</i>	

Power pentode used in the audio output stage of television receivers.

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 0 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	25 V	Nominal
Heater current	300 mA	Nominal
Maximum grid 2 input	2 W	ClassA
Plate supply voltage	110 V	ClassA
Grid 2 supply voltage	115 V	ClassA
Cathode resistor	62 ohm	ClassA
Peak AF grid 1 voltage	3 V	ClassA
Load resistance	3000 ohm	ClassA
Total harmonic distortion	7 %	ClassA
Signal power output	1.4 W	ClassA
Plate supply voltage	140 V	ClassAB; PushPull; TwoTubes
Grid 2 supply voltage	120 V	ClassAB; PushPull; TwoTubes
Effective load resistance plate-to-plate	6000 ohm	ClassAB; PushPull; TwoTubes
Total harmonic distortion	5 %	ClassAB; PushPull; TwoTubes
Maximum-signal power output	3.8 W	ClassAB; PushPull; TwoTubes

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Zero-signal plate current	42 mA	ClassA
Zero-signal grid 2 current	11.5 mA	ClassA
Transconductance	14600 uS	ClassA
Plate resistance	11000 ohm	ClassA

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid 1 to plate	0.65 pF	Approximate
Grid 1 to cathode/grid3/heater/grid2	17 pF	Approximate
Plate to cathode/grid3/heater/grid2	9 pF	Approximate



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 0 · Beam Power

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	25 V	—
Heater Current	300 mA	—
Plate Resistance	11000 ohm	—
Transconductance	14600 uS	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	110 V	ClassA
Screen Voltage	115 V	ClassA
Cathode Bias Resistor	62 ohm	ClassA
Peak AF Grid1 Voltage	3 V	ClassA
Zero-Signal Plate Current	42 mA	ClassA
Zero-Signal Screen Current	11.5 mA	ClassA
Load Resistance	3000 ohm	ClassA
Power Output	1.4 W	ClassA
Total Harmonic Distortion	7 percent	ClassA



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1966 Tung Sol Electronic Tubes 3 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 3 OF 4

Section 0 · Beam Power

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid 1-to-plate capacitance	0.65 pF	WholeTube
Input capacitance	17 pF	WholeTube
Output capacitance	9 pF	WholeTube

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	150 V	WholeTube
Maximum screen voltage	130 V	WholeTube
Maximum plate dissipation	5.5 W	WholeTube
Maximum screen input	2 W	WholeTube
Transconductance	14600 μ S	ClassA1
Plate resistance	11000 ohm	ClassA1
Load resistance	3000 ohm	ClassA1
Power output	1.4 W	ClassA1
Push-pull power output	3.8 W	PushPull ClassAB1 TwoTubes



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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	150 V	—
Maximum Screen Voltage	130 V	—
Plate Dissipation	5 W	—
Screen Input	1.75 W	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	14000 Ω	—
Transconductance	12000 μS	—



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

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

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
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 (Aprox.)	11000 ohm	TypicalOperation
Transconductance	14600 uS	TypicalOperation
Load Resistance	3000 ohm	TypicalOperation
TotalHarmonic Distortion	7 %	TypicalOperation
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

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to Plate	0.65 pF	Capacitance

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

TUBE TINKER

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