



ELECTRONIC TUBE REFERENCE

4CB6

Voltage - Pentode Sharp Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

PENTODE

Sharp-cutoff pentode designed for television IF, picture-IF, video, or VHF tuner amplifier service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	7
NOMINAL HEATER	4.2 V / 450 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Pentode	
PLATE RESISTANCE	280000 Ω
TRANSCONDUCTANCE	0.008 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	150 V
MAXIMUM PLATE DISSIPATION	2.3 W
MAXIMUM SCREEN DISSIPATION	0.55 W
WARM-UP TIME	11 s
Reference/equivalence-only source: ratings/characteristics for this section are not reproduced; missing promoted values intentionally not inferred from the external 6CB6-A datasheet.	

Sharp-cutoff pentode used as a television IF amplifier to about 45 MHz and 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 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Warmup Time	11 s	—

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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	125 V	—
Screen-grid voltage	125 V	—
Cathode bias resistor	56 0hm	—
Plate current	13 mA	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	280000 0hm	—
Transconductance	8000 uS	—
Control-grid cutoff voltage	-6.5 V	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.025 pF	Unshielded
Input capacitance	6.5 pF	Unshielded
Output capacitance	2 pF	Unshielded



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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	4.2 V	—
Heater Current	450 mA	—
Transconductance	10000 uS	RepresentativePublishedPoint
Plate Resistance	280000 ohm	RepresentativePublishedPoint
Grid-Plate Capacitance	0.55 pF	PublishedDirectInterelectrodeCapacitance

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	330 V	—
Maximum Plate Dissipation	2.3 W	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1966 Tung Sol Electronic Tubes 1 of 4

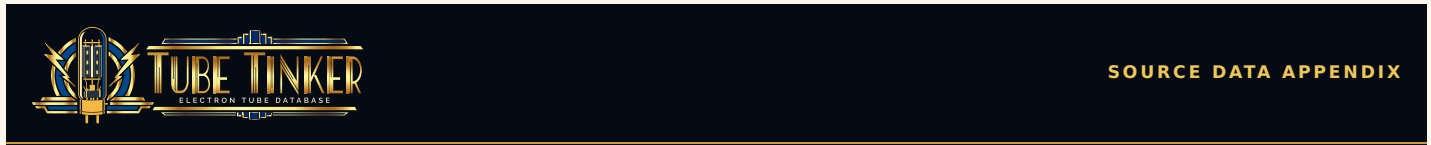
Published test conditions and operating points. Values on this page are preserved as reported by this source.

1966 TUNG SOL ELECTRONIC TUBES 1 OF 4

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	125 V	IFAmplifier
Screen voltage	125 V	IFAmplifier
Plate current	13 mA	IFAmplifier
Screen current	4 mA	IFAmplifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	9500 μ S	Section1
Plate resistance	300000 Ω	Section1



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	4.2 V	—
Heater Current	450 mA	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Current	420 mA–480 mA	Published nominal $\pm$ tolerance
Heater Voltage	4.2 V	At heater current 0.45 A
Warm-Up Time	11 s	Average
Peak Heater-Cathode Voltage - Heater Negative	300 V	DC component must not exceed 200 V
Peak Heater-Cathode Voltage - Heater Positive	200 V	DC component must not exceed 100 V
Plate Voltage	125 V	Inherited from explicitly referenced 6-volt parent type; heater variant
Screen Voltage	125 V	Inherited from explicitly referenced 6-volt parent type; heater variant
Cathode Bias Resistor	56 Ω	Inherited from explicitly referenced 6-volt parent type; heater variant
Plate Current	13 mA	Inherited from explicitly referenced 6-volt parent type; heater variant
Screen Current	3.7 mA	Inherited from explicitly referenced 6-volt parent type; heater variant

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	280000 Ω	Inherited from explicitly referenced 6-volt parent type; heater variant
Transconductance	8000 μS	Inherited from explicitly referenced 6-volt parent type; heater variant



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.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
about	45 MHz	Published in approved 6CB6A target datasheet entry; Section1
Heater Voltage (ac/dc) 3.15 4.2	6.3 V	Published in approved 6CB6A target datasheet entry; Section1
Heater Current 0.6 0.45	300 mA	Published in approved 6CB6A target datasheet entry; Section1
Heater Warm-up Time (Average) 11 11	11 seconds	Published in approved 6CB6A target datasheet entry; Section1
Plate Voltage	330 V	Published in approved 6CB6A target datasheet entry; Section1
Grid-No.5 (Suppressor-Grid) Voltage, Positive value	0 V	Published in approved 6CB6A target datasheet entry; Section1
Grid-No.2 Supply Voltage	330 V	Published in approved 6CB6A target datasheet entry; Section1
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0 V	Published in approved 6CB6A target datasheet entry; Section1
For grid-No.2 voltages between 165 and	330 V	Published in approved 6CB6A target datasheet entry; Section1
Plate Supply Voltage	125 V	Published in approved 6CB6A target datasheet entry; Section1
Cathode-Sias Resistor	56 Ω	Published in approved 6CB6A target datasheet entry; Section1
Grid-No.2 Current	3.7 mA	Published in approved 6CB6A target datasheet entry; Section1
Grid-No.1 VoJt&ge (Approx.) for plate current of 20 jiA	-6.5 V	Published in approved 6CB6A target datasheet entry; Section1
Grid-No.1 Voltage (Approx.) for plate current of	2.8 mA	Published in approved 6CB6A target datasheet entry; Section1
Grid-No.1 Voltage (Approx.) for plate current of 2.8 mA	-3 V	Published in approved 6CB6A target datasheet entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No. 3. and Internal Shield 6.5	6.6 pF	Published in approved 6CB6A target datasheet entry; Section1



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