

ELECTRONIC TUBE REFERENCE

4AU6

Voltage - Pentode Sharp Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Sharp-cutoff pentode designed for RF, VHF/UHF, wide-band, or voltage-amplifier service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7BK	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

7BK - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – G1	A	G1 – Control Grid	CONNECTED
PIN2 – G3	A	G3 – Suppressor Grid	CONNECTED
PIN2 – IS	A	IS – Internal Screen	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 – K	A	K – Cathode	CONNECTED

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	500000 Ω
TRANSCONDUCTANCE	0.0045 S
AMPLIFICATION FACTOR	36
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	3 W
MAXIMUM SCREEN DISSIPATION	0.65 W
MAXIMUM HEATER-CATHODE VOLTAGE	180 V
WARM-UP TIME	11 s
<i>Reference/equivalence-only source: ratings/characteristics for this section are not reproduced; missing promoted values intentionally not inferred from the external 6AU6-A datasheet.</i>	

Sharp-cutoff miniature pentode for RF amplification in high-frequency wide-band equipment and for FM limiter service.



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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	PentodeConnection
Screen-grid voltage	125 V	PentodeConnection
Cathode resistor	100 0hm	PentodeConnection
Transconductance	4500 uS	PentodeConnection
Plate resistance	1500000 0hm	PentodeConnection
Plate current	7.6 mA	PentodeConnection
Screen-grid current	3 mA	PentodeConnection
Triode-connected plate voltage	250 V	TriodeConnection
Triode-connected amplification factor	36 ratio	TriodeConnection

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode-connected plate resistance	7500 0hm	TriodeConnection

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.0035 pF	PentodeConnection
Input capacitance	5.5 pF	PentodeConnection
Output capacitance	5 pF	PentodeConnection



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

1966 Tung Sol Electronic Tubes 1 of 4

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1966 TUNG SOL ELECTRONIC TUBES 1 OF 4

Section 1 · Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance maximum	0.0035 pF	Section1
Input capacitance	5.5 pF	Section1
Output capacitance	5 pF	Section1

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA
Screen voltage	150 V	ClassA
Control-grid voltage	-2 V	ClassA
Plate current	10.5 mA	ClassA
Screen current	4.2 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	5200 μS	Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	1 MΩ	Section1


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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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 DATA APPENDIX

SOURCE OPERATING CONDITIONS

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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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Current	420 mA–480 mA	Published nominal ± tolerance
Heater Voltage	4.2 V	At heater current 0.45 A
Warm-Up Time	11 s	Average
Plate Voltage	250 V	Inherited from explicitly referenced 6-volt parent type; heater variant
Screen Voltage	150 V	Inherited from explicitly referenced 6-volt parent type; heater variant
Plate Current	10.6 mA	Inherited from explicitly referenced 6-volt parent type; heater variant

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen Current	4.3 mA	Inherited from explicitly referenced 6-volt parent type; heater variant

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	5200 μ S	Inherited from explicitly referenced 6-volt parent type; heater variant
Plate Resistance	1 M Ω	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.

1975 RCA RC30

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) 3.15 4.2 6.3	12.6 V	Published in approved 6AU6A target entry; Section1
Heater Current 0.6 0.45 0.3	150 mA	Published in approved 6AU6A target entry; Section1
age) 11 11	11 seconds	Published in approved 6AU6A target entry; Section1
Plate Voltage 275	330 V	Published in approved 6AU6A target entry; Section1
Positive value	0 V	Published in approved 6AU6A target entry; Section1
0	0 V	Published in approved 6AU6A target entry; Section1
Plate Dissipation 3.5	3.5 W	Published in approved 6AU6A target entry; Section1
For grid-No.2 voltages up to	165 V	Published in approved 6AU6A target entry; Section1
For grid-No.2 voltages between 165 and	330 V	Published in approved 6AU6A target entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
D-No	1 V	Published in approved 6AU6A target entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Internal Shield	55 pF	Published in approved 6AU6A target entry; Section1
Internal Shield	5 pF	Published in approved 6AU6A target entry; Section1
Grid No.1 to Plate, Grid No.2, Grid No.3, and Internal Shield	2.6 pF	Published in approved 6AU6A target entry; Section1
Grid No.1 to Cathode and Heater 3	2 pF	Published in approved 6AU6A target entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.2 Supply Voltage 100 125	150 V	Published in approved 6AU6A target entry; Section1
Cathode-Bias Resistor 330 150 100	68 Ω	Published in approved 6AU6A target entry; Section1
Plate Resistance (Approx.) 0.5 1.5	1 MΩ	Published in approved 6AU6A target entry; Section1
Plate Current 12.2 5 7.6	10.6 mA	Published in approved 6AU6A target entry; Section1
2.1 3	4.3 mA	Published in approved 6AU6A target entry; Section1
of 10 f1A -4.2 -5.5	-6.5 V	Published in approved 6AU6A target entry; Section1

TUBE TINKER

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