

ELECTRONIC TUBE REFERENCE

4AV6

Voltage - Triode (with diode, heptode or hexode) electronic tube

CONSOLIDATED TECHNICAL DATA

3 SECTIONS
CONSTRUCTION
DIODE-DIODE-TRIODE

Double-diode high-mu triode combining detector, AVC, and audio voltage-amplifier functions in automobile and AC-operated receivers. The paired diodes provide rectification while the triode supplies substantial gain after detection.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7BT	BASE PINS	7
NOMINAL HEATER	4.2 V / 450 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Common cathode	SECTION CONSTRUCTION	Dissimilar

7BT - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – 1G1	A	G1 – Control Grid	CONNECTED
PIN2 – K	A	K – Cathode	CONNECTED
PIN3 – H	–	H – Heater	CONNECTED
PIN4 – H	–	H – Heater	CONNECTED
PIN5 – 2P	B	P – Plate (Anode)	CONNECTED
PIN6 – 3P	C	P – Plate (Anode)	CONNECTED
PIN7 – 1P	A	P – Plate (Anode)	CONNECTED

SECTION RATINGS

SECTION1 Diode	
MAXIMUM PLATE DISSIPATION	0.55 W
MAXIMUM CATHODE CURRENT	1 mA
WARM-UP TIME	11 s
<i>Published ratings and characteristics promoted where applicable.</i>	

SECTION2 Diode	
<i>No fixed ratings recorded.</i>	
<i>Second physical diode section added in approved section-structure reconciliation.</i>	

SECTION3 Triode	
PLATE RESISTANCE	62500 Ω
TRANSCONDUCTANCE	0.0016 S
AMPLIFICATION FACTOR	100
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	0.55 W
WARM-UP TIME	11 s
<i>Published ratings and characteristics promoted where applicable.</i>	

Twin-diode high-mu triode used as a combined detector, amplifier, and AVC tube in automobile and AC-operated radio 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 3 · Triode

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



SOURCE OPERATING CONDITIONS

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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 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Detector/AVC diode	EachDiode
Peak inverse voltage maximum	330 V	EachDiode
Average current maximum	1 mA	EachDiode

1966 TUNG SOL ELECTRONIC TUBES 1 OF 4

Section 3 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	100 V	AudioAmplifier
Control-grid voltage	-1 V	AudioAmplifier
Plate voltage	250 V	AudioAmplifier
Control-grid voltage	-2 V	AudioAmplifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	80000 Ω	100VPlate
Amplification factor	100	Section1
Plate resistance	62500 Ω	250VPlate
Transconductance	1600 μ S	Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	1.7 pF	Section1



SOURCE DATA APPENDIX

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

Section 3 · Triode

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
Plate Voltage	250 V	Inherited from explicitly referenced 6-volt parent type; heater variant
Grid Voltage	-2 V	Inherited from explicitly referenced 6-volt parent type; heater variant
Plate Current	1.2 mA	Inherited from explicitly referenced 6-volt parent type; heater variant

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification Factor	100	Inherited from explicitly referenced 6-volt parent type; heater variant
Plate Resistance	62500 Ω	Inherited from explicitly referenced 6-volt parent type; heater variant

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	1600 μ S	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 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) 4.2 6.3	12.6 V	Published in approved 6AV6 target entry; Section2
Heater Current 0.45 0.3	150 mA	Published in approved 6AV6 target entry; Section2

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode Grid to Triode Plate	2 pF	Published in approved 6AV6 target entry; Section2
Triode Grid to Cathode and Heater	2.2 pF	Published in approved 6AV6 target entry; Section2
This value is	1.2 pF	Published in approved 6AV6 target entry; Section2
Plate Voltage	330 V	Published in approved 6AV6 target entry; Section2
Grid Voltage, Positive-bias value	0 V	Published in approved 6AV6 target entry; Section2
Plate Dissipation	0.55 W	Published in approved 6AV6 target entry; Section2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage 100	250 V	Published in approved 6AV6 target entry; Section2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
– 1	-2 V	Published in approved 6AV6 target entry; Section2
Plate Resistance 80000	62500 Ω	Published in approved 6AV6 target entry; Section2
Plate Current 0.50	1.2 mA	Published in approved 6AV6 target entry; Section2
Plate Current (Each Unit)	1 mA	Published in approved 6AV6 target entry; Section2

1975 RCA RC30

Section 3 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) 4.2 6.3	12.6 V	Published in approved 6AV6 target entry; Section1
Heater Current 0.45 0.3	150 mA	Published in approved 6AV6 target entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode Grid to Triode Plate	2 pF	Published in approved 6AV6 target entry; Section1
Triode Grid to Cathode and Heater	2.2 pF	Published in approved 6AV6 target entry; Section1
This value is	1.2 pF	Published in approved 6AV6 target entry; Section1
Plate Voltage	330 V	Published in approved 6AV6 target entry; Section1
Grid Voltage, Positive-bias value	0 V	Published in approved 6AV6 target entry; Section1
Plate Dissipation	0.55 W	Published in approved 6AV6 target entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage 100	250 V	Published in approved 6AV6 target entry; Section1
– 1	-2 V	Published in approved 6AV6 target entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance 80000	62500 Ω	Published in approved 6AV6 target entry; Section1
Plate Current 0.50	1.2 mA	Published in approved 6AV6 target entry; Section1
Plate Current (Each Unit)	1 mA	Published in approved 6AV6 target entry; Section1