

ELECTRONIC TUBE REFERENCE

6AV6

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

CONSOLIDATED TECHNICAL DATA

3 SECTIONS
CONSTRUCTION
DIODE-DIODE-TRIODE

Double-diode very-high-mu triode widely used for radio detector, AVC, and first audio-amplifier service. Its paired diodes perform signal and control-voltage rectification while the triode provides substantial voltage gain.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7BT	BASE PINS	7
NOMINAL HEATER	6.3 V / 300 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 CATHODE CURRENT	1 mA
<i>Promoted from published ratings/characteristics; identical repeated sections compressed where applicable.</i>	

SECTION2 Diode	
MAXIMUM CATHODE CURRENT	1 mA
<i>Promoted from published ratings/characteristics; identical repeated sections compressed where applicable.</i>	

SECTION3 Triode	
PLATE RESISTANCE	62500 Ω
TRANSCONDUCTANCE	0.0016 S
AMPLIFICATION FACTOR	100
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	0.5 W
MAXIMUM HEATER-CATHODE VOLTAGE	90 V
<i>Promoted from published ratings/characteristics; identical repeated sections compressed where applicable.</i>	

Combined dual-diode and triode tube intended for detector and audio-frequency amplifier service.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1958 Brimar Radio Valve No 7

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

1958 BRIMAR RADIO VALVE NO 7

Section 1 · Diode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	300 mA	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

195X General Electric Essential Characteristics

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

195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

Section 2 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA
Control-grid voltage	-2 V	ClassA
Plate current	1.2 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	62500 Ω	ClassA
Transconductance	1600 μS	ClassA
Amplification factor	100	ClassA

Section 3 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA
Control-grid voltage	-2 V	ClassA
Plate current	1.2 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	62500 Ω	ClassA
Transconductance	1600 μS	ClassA
Amplification factor	100	ClassA



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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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 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	300 mA	—

1961 TUNG SOL

Section 2 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	300 mA	—

1961 TUNG SOL

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	300 mA	—
Plate current	0.5 mA	Typical operating conditions



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SOURCE OPERATING CONDITIONS

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1963 Amperex Condensed

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

1963 AMPEREX CONDENSED

Section 1 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	Published table
Control-grid bias	-2 V	Published table
Plate current	1.2 mA	Published table

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	1600 μ S	Published table
Amplification factor	100	Published table
Plate resistance	62500 ohm	Published table
Heater voltage	6.3 V	Published heater rating
Heater current	300 mA	Published heater rating



SOURCE DATA APPENDIX

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 · Diode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	300 mA	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum DC diode current	1 mA	—

1965 SYLVANIA ELECTRONIC TUBES VOL3

Section 2 · Diode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	300 mA	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum DC diode current	1 mA	—

1965 SYLVANIA ELECTRONIC TUBES VOL3

Section 3 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	300 mA	—
Amplification factor	100	—
Plate resistance	62500 ohm	—
Transconductance	1600 uS	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	330 V	—
Maximum plate dissipation	0.55 W	—
Typical plate voltage	250 V	—
Typical grid voltage	-2 V	—
Plate current	1.2 mA	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	2 pF	—
Input capacitance	2.2 pF	—
Output capacitance	0.8 pF	—


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 · Diode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published table
Heater current	300 mA	Published table
Triode plate resistance	62500 ohm	TriodeSection
Triode transconductance	1600 μ S	TriodeSection
Triode amplification factor	100	TriodeSection

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode plate voltage	250 V	TriodeSection
Triode grid voltage	-2 V	TriodeSection
Triode plate current	1.2 mA	TriodeSection

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Average diode current	2 mA	EachDiode At10VDC



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 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Continuous Diode Current	1 mA	EachDiode



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1968 Mazda Belvu

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

1968 MAZDA BELVU
Section 1 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage ceoseeserenenensmnnnsnnns VĖ	6.3 V	—
Heater current ceererescessecseensnn IĖ	300 mA	—
Tension d'ANOd@ osschersreneasecenmencemensassrroseses VA	300 V	—
Tension de grille ... Ve	0 V	—
Plate dissipation..... .. Pa	0.5 W	—
Tension entre filament et cathode Vfk	90 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current (par diod@).....eeerseeeee TB	1 mA	—
Tension d'Anod@ reeeeenenennsnsenennnnnnnsns V 100	250 V	—
Tension de grille » VE -1	-2 V	—
Plate resistance.... - p 80	62.5 kΩ	—
Transconductance . .S 1,25	1.6 mA/V	—
Courant dan0de ... Ia 0,5	1.2 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacitance grille/anode s CG/à	2 pF	InterelectrodeCapacitance
Capacitance grille/ cathode, filament Cg/Kkf	2.2 pF	InterelectrodeCapacitance
Capacitance anode/ cathode, filament Ca/ kf	0.8 pF	InterelectrodeCapacitance
Capacitance anode Diode n° 2/ grille Triode CaD,/ gT	0.04 pF	InterelectrodeCapacitance



SOURCE DATA APPENDIX

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 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage nominal	6.3 V	—
Heater current	300 mA	—
Maximum plate current	1 mA	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current at 10 V	2 mA	—

1971 RCA HB3 BINDER 4 OF 7

Section 2 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage nominal	6.3 V	—
Heater current	300 mA	—
Maximum plate current	1 mA	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current at 10 V	2 mA	—

1971 RCA HB3 BINDER 4 OF 7

Section 3 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage nominal	6.3 V	—
Heater current	300 mA	—
Maximum plate voltage	330 V	ClassA1
Maximum plate dissipation	0.55 W	ClassA1

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA1
Amplification factor	100	ClassA1
Plate resistance	62500 ohm	ClassA1
Transconductance	1600 μ S	ClassA1
Plate current	1.2 mA	ClassA1



SOURCE DATA APPENDIX

1975 RCA RC30

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

1975 RCA RC30
Section 2 · 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
– 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

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
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

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes, and their source documents.

