

ELECTRONIC TUBE REFERENCE

3AV6

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

CONSOLIDATED TECHNICAL DATA

3 SECTIONS
CONSTRUCTION
DIODE-DIODE-TRIODE

3AV6 seven-pin miniature twin-diode high-mu triode for radio detection, AVC rectification and audio voltage amplification, with a 3.15 V 600 mA series-string heater.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7BT	BASE PINS	7
NOMINAL HEATER	3.15 V / 600 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
3AV6 diode unit 1, plate pin6, common cathode with triode. Manufacturer max CONTINUOUS DC diode plate current 1 mA. Separate characterization at 10 V DC gives typical 2 mA, not continuous service rating. Do not promote 1 mA into rectifier nominal output current because it is a maximum diode current not a nominal rectifier output. Heater 3.15 V 0.6 A, heater-cathode max ± 200 V total DC+peak. Diode coupling shield minimizes interaction with triode.	

SECTION2 Diode	
No fixed ratings recorded. 3AV6 diode unit 2, plate pin5, common cathode with triode. Manufacturer max CONTINUOUS DC diode plate current 1 mA. Separate characterization at 10 V DC gives typical 2 mA, not continuous service rating. Diode2 plate-to-triode grid capacitance max 0.04 pF. Do not promote 1 mA into rectifier nominal output current because it is a maximum diode current not a nominal rectifier output. Heater 3.15 V 0.6 A, heater-cathode max ± 200 V total DC+peak.	

SECTION3 Triode	
PLATE RESISTANCE	62500 Ω
TRANSCONDUCTANCE	0.0016 S
AMPLIFICATION FACTOR	100
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	0.55 W
WARM-UP TIME	11 s
3AV6 high-mu triode (Tung-Sol/RCA/Sylvania). Later design-maximum plate 330 V, dissipation 0.55 W; earlier Tung-Sol design-center 300 V and 0.5 W. Typical at plate 250 V grid -2 V: Ia 1.2 mA, mu 100, rp 62500 Ω, gm 0.0016 A/V. Alternate at plate 100 V grid -1 V: Ia 0.5 mA, mu 100, rp 80000 Ω, gm 0.00125 A/V. Cgp 2.0 pF, input 2.2 pF, output 1.2 pF shielded/0.8 pF unshielded. Maximum positive grid DC 0 V, heater-cathode ± 200 V total DC+peak, positive DC heater-cathode 100 V. Cathode shared with two diode plates.	

3AV6 is described in the supplied Tung-Sol datasheet as a controlled-warm-up dual-diode high-mu triode equivalent to 6AV6. Published electrical ratings and operating characteristics were extracted from the supplied source.

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

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
MaximumDiodeCurrent	1 mA	EachUnit

CAPACITANCE

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid To Plate Capacitance	2 pF	Triode