

MAXIMUM CIRCUIT VALUE

Grid-No.1-Circuit Resistance 0.47 megohm

Pulse duration must not exceed 15% of a horizontal scanning cycle (10 microseconds).
 * Under no circumstances should this absolute value be exceeded.

†† A bias resistor or other means is required to protect the tube in absence of excitation.

6AV5GT

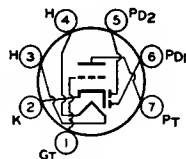
Refer to chart at end of section.

6AV6

3AV6, 4AV6, 12AV6

**TWIN DIODE—
HIGH-MU TRIODE**

Miniature type used as combined detector, amplifier, and avc tube in automobile and ac-operated radio receivers. The 6AV6 may be substituted directly for the 6AT6 in applications where the higher amplification of the 6AV6 is advantageous. Outlines section, 5C; requires miniature 7-contact socket. Types 3AV6, 4AV6, and 12AV6 are identical with type 6AV6 except for heater ratings.

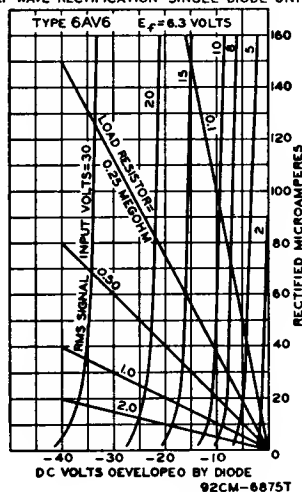
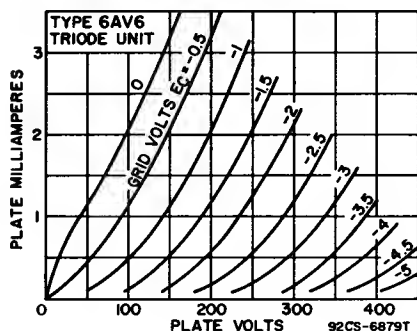
**7BT**

	3AV6	4AV6	6AV6	12AV6	
Heater Voltage (ac/dc)	3.15	4.2	6.3	12.6	volts
Heater Current	0.6	0.45	0.3	0.15	ampere
Heater Warm-up Time (Average)	11	11	—	—	seconds
Heater-Cathode Voltage:					
Peak value	±200 max	±200 max	±200 max	±200 max	volts
Average value	100 max	100 max	100 max	100 max	volts
Direct Interelectrode Capacitances:					
Triode Grid to Triode Plate				2	pF
Triode Grid to Cathode and Heater				2.2	pF
Triode Plate to Cathode and Heater				0.8*	pF
Plate of Diode Unit No.2 to Triode Grid				0.04 max	pF

* This value is 1.2 pF with external shield connected to cathode.

Triode Unit as Class A₁ Amplifier**MAXIMUM RATING (Design-Maximum Value)**

Plate Voltage	330	volts
Grid Voltage, Positive-bias value	0	volts
Plate Dissipation	0.55	watt

**AVERAGE DIODE CHARACTERISTICS
HALF-WAVE RECTIFICATION—SINGLE DIODE UNIT**

CHARACTERISTICS

Plate Voltage	100	250	volts
Grid Voltage	—1	—2	volts
Amplification Factor	100	100	
Plate Resistance	80000	62500	ohms
Transconductance	1250	1600	μ mhos
Plate Current	0.50	1.2	mA

Diode Units

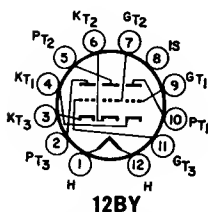
MAXIMUM RATING (Design-Maximum Value)

Plate Current (Each Unit)	1	mA
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The two diode plates are placed around a cathode, the sleeve of which is common to the triode unit. Each diode plate has its own base pin. Diode biasing of the triode unit is not recommended.

Installation and Application

The triode unit of the 6AV6 is recommended for use only in resistance-coupled circuits. Refer to the Resistance-Coupled Amplifier section for typical operating conditions. Grid bias for the triode unit of the 6AV6 may be obtained from a fixed source, such as a fixed-voltage tap on the dc power supply, or from a cathode-bias resistor. It should not be obtained by the diode-biasing method because of the probability of plate-current cutoff, even with relatively small signal voltages applied to the diode circuit.



**MEDIUM-MU
TRIPLE TRIODE**

6AV11

Duodecar type used for general-purpose amplifier, phase inverter, or oscillator applications. Outlines section, 8A; requires duodecar 12-contact socket.

Heater Voltage (ac/dc)	6.3	volts		
Heater Current	0.6	ampere		
Heater-Cathode Voltage:				
Peak value	±200 max	volts		
Average value	100 max	volts		
Direct Interelectrode Capacitances (Approx.):	Unit No. 1	Unit No. 2	Unit No. 3	
Grid to Plate	1.2	1.2	1.2	pF
Grid to Cathode, Heater, and Internal Shield	1.9	1.9	1.9	pF
Plate to Cathode, Heater, and Internal Shield	1.8	0.7	2	pF

Class A₁ Amplifier (Each Unit)

MAXIMUM RATINGS (Design-Maximum Values)

Plate Voltage	330	volts
Plate Dissipation	2.75	watts
Total Plate Dissipation (All Plates)	6	watts
Average Cathode Current	20	mA

CHARACTERISTICS

Plate Voltage	100	250	volts
Grid Voltage	0	—8.5	volts
Amplification Factor	20	17	
Plate Resistance (Approx.)	6500	7700	ohms
Transconductance	3100	2200	μ mhos
Plate Current	11.8	10.5	mA
Grid Voltage (Approx.) for plate current of 10 μ A	—	—24	volts

MAXIMUM CIRCUIT VALUES

Grid-No. 1-Circuit Resistance:		
For fixed-bias operation	0.25	megohm
For cathode-bias operation	1	megohm

Refer to chart at end of section.

6AW8