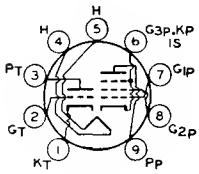


9DX

HIGH-MU TRIODE—SHARP-CUTOFF PENTODE **6HZ8**

Miniature type used in television receiver applications. The triode unit is used as a voltage amplifier or sync separator, and the pentode unit as a video amplifier. **Outlines section,** 8E; requires miniature 9-contact socket. **Heater:** volts (ac/dc), 6.3; amperes, 1.125; maximum heater-cathode volts, ±200 peak, 100 average.

Class A_1 Amplifier

	Triode Unit	Pentode Unit	
MAXIMUM RATINGS (Design-Maximum Values)			
Plate Voltage	300	300	volts
Grid-No.2 (Screen-Grid) Supply Voltage	—	330	volts
Grid-No.2 Voltage	—	See curve page 98	
Grid-No.1 (Control-Grid) Voltage, Positive bias value	0	0	volts
Plate Dissipation	1	8	watts
Grid-No.2 Input:			
For grid-No.2 voltages up to 165 volts	—	2	watts
For grid-No.2 voltages between 165 and 330 volts	—	See curve page 98	
CHARACTERISTICS			
Plate Voltage	200	60 250	volts
Grid-No.2 Supply Voltage	—	170 170	volts
Grid-No.1 Voltage	—2	0 —	volts
Cathode-Bias Resistor	—	— 100	ohms
Amplification Factor	70	— —	
Plate Resistance (Approx.)	—	— 0.14	megohm
Transconductance	4000	— 12600	μmhos
Plate Current	3.5	90▪ 29	mA
Grid-No.2 Current	—	22.5▪ 6	mA
Grid-No.1 Voltage (Approx.) for plate current of 10 μA	—5	— —11.5	volts
MAXIMUM CIRCUIT VALUES			
Grid-No.1-Circuit Resistance:			
For fixed-bias operation	0.5	0.25	megohm
For cathode-bias operation	1	1	megohm

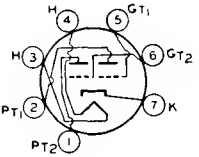
▪ This value can he measured by a method involving a recurrent waveform such that the maximum ratings of the tube will not he exceeded.

Refer to chart at end of section. **6J5 6J5GT**

Refer to chart at end of section. **6J6**

MEDIUM-MU TWIN TRIODE **6J6A**

5J6



7BF

Miniature type used as combined rf power amplifier and oscillator or as twin af amplifier. With push-pull arrangement of the grids and the plates in parallel, this type can also be used as a mixer at frequencies as high as 600 MHz. **Outlines section,** 5C; requires miniature 7-contact socket. Type 5J6 is identical with type 6J6A except for heater ratings.

	5J6	6J6A	
Heater Voltage (ac/dc)	4.7	6.3	volts
Heater Current	0.6	0.45	ampere
Heater Warm-up Time (Average)	11	11	seconds
Peak Heater-Cathode Voltage	±100 max	±100 max	volts
Direct Interelectrode Capacitances (Each Unit, Approx.):	**Unshielded**	**Shielded**	
Grid to Plate	1.6	1.6	pF
Grid to Cathode and Heater	2.2	2.6	pF
Plate to Cathode and Heater (Unit No.1)	0.4	1.6	pF
Plate to Cathode and Heater (Unit No.2)	0.4	1	pF

Class A_1 Amplifier

MAXIMUM RATINGS (Design-Maximum Values)		
Plate Voltage	300	volts
Grid Voltage, Positive-bias value	0	volts
Plate Dissipation	1.5	watts
CHARACTERISTICS		
Plate Voltage	100	volts
Cathode-Bias Resistor	50†	ohms
Amplification Factor	38	
Plate Resistance (Approx.)	7100	ohms
Transconductance	5300	μmhos
Plate Current	8.5	mA
MAXIMUM CIRCUIT VALUES		
Grid-Circuit Resistance:		
For fixed-bias operation	Not recommended	
For cathode-bias operation	0.5	megohm

† Value is for both units operating at the specified conditions.

RF Power Amplifier and Oscillator—Class C Telegraphy

Key-down conditions per tube without modulation

MAXIMUM RATINGS (Design-Center Values, Each Unit)		
Plate Voltage	300	volts
Grid Voltage:		
Negative-bias value	40	volts
Positive-bias value	0	volts
Plate Current	15	mA
Grid Current	8	mA
Plate Input	4.5	watts
Plate Dissipation	1.5	watts
TYPICAL PUSH-PULL OPERATION (Both Units)		
Plate Voltage	150	volts
Grid Voltage°	—10	volts
Plate Current	30	mA
Grid Current (Approx.)	16	mA
Driving Power (Approx.)	0.35	watt
Power Output (Approx.)	3.5	watts

° Obtained hy grid resistor (625 ohms), cathode-hias resistor (220 ohms), or fixed supply.

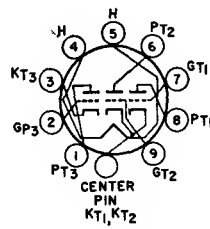
6J7
6J7G
6J7GT

Refer to chart at end of section.

6J8G

Refer to chart at end of section.

6J9 HIGH-MU TRIPLE TRIODE



10G

Miniature type used as rf-amplifier, oscillator, and mixer into the vhf range. Outlines section, 6B, except center pin is added to base; requires miniature 10-contact socket.

	Series	Parallel	
Heater Arrangement			
Heater Voltage (ac/dc)	6.3	6.3	volts
Heater Current	0.45	0.45	mA
Heater Warm-up Time (Average)	11	—	seconds
Peak Heater-Cathode Voltage	±100 max	±100 max	volts

Class A_1 Amplifier (Each Unit Unless Otherwise Specified)

MAXIMUM RATINGS (Design-Maximum Values)		
Plate Voltage	330	volts
Grid Voltage:		
Negative-bias value	50	volts
Positive-bias value	0	volts
Plate Dissipation	2	watts
Total Plate Dissipation (All plates)	5	watts