

- \* With external shield connected to cathode except as noted.
- With external shield connected to pentode plate.

### Class A<sub>1</sub> Amplifier

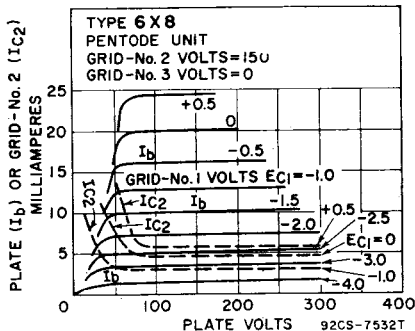
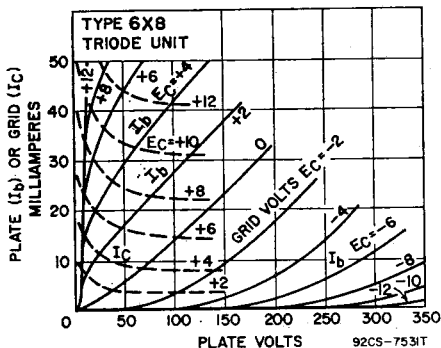
#### MAXIMUM RATINGS (Design-Maximum Values)

Plate Voltage	275
Grid No.2 (Screen-Grid) Supply Voltage	—
Grid-No.2 Voltage	— See curve page 300
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0
Plate Dissipation	1.7
Grid-No.2 Input:	
For grid-No.2 voltages up to 137.5 volts	—
For grid-No.2 voltages between 137.5 and 275 volts	— See curve page 300

Triode Unit	Pentode Unit	
275	275	volts
—	275	volts
—	See curve page 300	
0	0	volts
1.7	2.3	watts
—	0.45	watt
—	See curve page 300	

#### CHARACTERISTICS

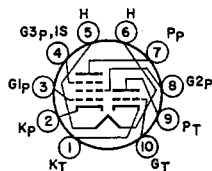
Plate Voltage	125	125	volts
Grid No.3	—	Connected to cathode at socket	
Grid-No.2 Voltage	—	125	volts
Grid-No.1 Voltage	-1	-1	volt
Amplification Factor	40	—	
Plate Resistance (Approx.)	6000	30000	ohms
Transconductance	6500	5500	$\mu$ mhos
Plate Current	12	9	mA
Grid-No.2 Current	—	2.2	mA
Grid-No.1 Voltage (Approx.) for plate current of 20 $\mu$ A	-7	-6.5	volts



## 6X9/ ECF200

### HIGH-MU TRIODE— SHARP-CUTOFF PENTODE

Miniature type used as if-amplifier tube in television receivers. Outlines section 6B, except has 10-pin base; requires miniature 10-contact socket.



10K

Heater Voltage	6.3	volts
Heater Current	0.41	ampere
Peak Heater-Cathode Voltage	$\pm 150$ max	volts
Direct Interelectrode Capacitances:		
Triode Unit:		
Plate to All Other Elements (except grid)	3	pF
Grid to All Other Elements (except plate)	2.5	pF
Plate to Grid	2	pF
Pentode Unit:		
Plate to All Other Elements (except grid No.1)	3.5	pF
Grid No.1 to All Other Elements (except plate)	6.5	pF
Grid No.1 to Cathode	4	pF
Plate to Grid No.1	<6.5	pF
Grid No.1 to Grid No.2	1.8	pF

Pentode Grid No.1 to Triode Plate .....	15	pF
Pentode Grid No.1 to Triode Grid .....	<1.2	pF
Pentode Plate to Triode Plate .....	<1.5	pF

**Class A<sub>1</sub> Amplifier**

<b>MAXIMUM RATINGS</b> (Design-Maximum Values)	<b>Triode Unit</b>	<b>Pentode Unit</b>	
Plate Supply Voltage .....	550	550	volts
Plate Voltage .....	250	250	volts
Peak Plate Voltage* .....	600	—	volts
Grid-No.2 (Screen-Grid) Supply Voltage .....	—	550	volts
Grid-No.2 Voltage .....	—	250	volts
Cathode Current .....	18	18	mA
Plate Dissipation .....	1.5	2.1	watts
Grid-No.2 Input .....	—	0.7	watt

**CHARACTERISTICS**

Plate Voltage .....	170	160	volts
Grid-No.3 (Suppressor-Grid) Voltage .....	—	0	volts
Grid-No.2 Voltage .....	—	135	volts
Grid-No.1 (Control-Grid) Voltage .....	—1	—1.7	volts
Mu Factor, Grid-No.1 to Grid-No.2 .....	—	55	
Amplification Factor .....	55	—	
Transconductance .....	4800	14000	μmhos
Plate Current .....	8.5	13	mA
Grid-No.2 Current .....	—	5	mA

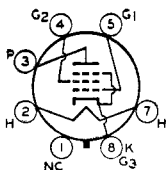
**MAXIMUM CIRCUIT VALUES**

Grid-No.1-Circuit Resistance .....	1	1	megohm
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\* With a maximum duty factor of 0.18 and maximum pulse duration of 18 microseconds.

Refer to chart at end of section.

6Y5



7AC

**BEAM POWER TUBE**

**6Y6GA/  
6Y6G**

Glass octal type used as output amplifier in radio receivers and in rf-operated, high-voltage power supplies in television equipment. Outlines section, 19B; requires octal socket.

Heater Voltage (ac/dc) .....	6.3	volts
Heater Current .....	1.25	amperes
Peak Heater-Cathode Voltage .....	±180 max	volts
Direct Interelectrode Capacitances (Approx.):		
Grid No.1 to Plate .....	0.7	pF
Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3 .....	12	pF
Plate to Cathode, Heater, Grid No.2, and Grid No.3 .....	7.5	pF

**Class A<sub>1</sub> Amplifier**

<b>MAXIMUM RATINGS</b> (Design-Center Values)		
Plate Voltage .....	200	volts
Grid-No.2 (Screen-Grid) Supply Voltage .....	200	volts
Grid-No.2 Voltage .....	See curve page 300	
Plate Dissipation .....	12.5	watts
Grid-No.2 Input:		
For grid-No.2 voltages up to 100 volts .....	1.75	watts
For grid-No.2 voltages between 100 and 200 volts .....	See curve page 300	

**TYPICAL OPERATION**

Plate Voltage .....	135	200	volts
Grid-No.2 Voltage .....	135	135	volts
Grid-No.1 (Control-Grid) Voltage .....	—13.5	—14	volts
Peak AF Grid-No.1 Voltage .....	13.5	14	volts
Zero-Signal Plate Current .....	58	61	mA
Maximum-Signal Plate Current .....	60	66	mA
Zero-Signal Grid-No.2 Current .....	3.5	2.2	mA
Maximum-Signal Grid-No.2 Current .....	11.5	9	mA
Plate Resistance (Approx.) .....	9300	18300	ohms
Transconductance .....	7000	7100	μmhos
Load Resistance .....	2000	2600	ohms
Total Harmonic Distortion .....	10	10	per cent
Maximum-Signal Power Output .....	3.6	6	watts