

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Center Values)

Plate Voltage	150	volts
Grid-No.2 (Screen-Grid) Voltage	117	volts
Plate Dissipation	5.5	watts
Grid-No.2 Input	1.0	watt
Bulb Temperature (At hottest point)	250	°C

TYPICAL OPERATION

Plate Voltage	150	volts
Grid-No.2 Voltage	110	volts
Grid-No.1 (Control-Grid) Voltage	-8.5	volts
Peak AF Grid-No.1 Voltage	8.5	volts
Zero-Signal Plate Current	35	mA
Maximum-Signal Plate Current	36	mA
Zero-Signal Grid-No.2 Current (Approx.)	2	mA
Maximum-Signal Grid-No.2 Current (Approx.)	6.5	mA
Transconductance	5600	μmhos
Load Resistance	4500	ohms
Total Harmonic Distortion	10	per cent
Maximum-Signal Power Output	2.2	watts

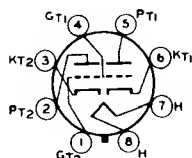
MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.1	megohm
For cathode-bias operation	0.5	megohm

Refer to chart at end of section.

6AS6

6AS7G
INDUSTRIAL
TYPE



8BD

LOW-MU TWIN POWER TRIODE

Glass octal type used as a regulator tube in dc power supply units and in projection television booster scanning applications. Outlines section, 27B; requires octal socket. Refer to type 6080 for average plate characteristics curves.

Heater Voltage (ac/dc)	6.3	volts
Heater Current	2.5	amperes
Heater-Cathode Voltage:		
Peak values	±300 max.	volts
Direct Interelectrode Capacitances (Approx.) each unit:		
Grid to plate	10.5	pF
Grid to heater and cathode	6.8	pF
Plate to heater and cathode	2.3	pF
Heater to cathode	11.0	pF
Grid of unit No. 1 to grid of unit No. 2	0.70	pF
Plate of unit No. 1 to plate of unit No. 2	1.65	pF

Class A₁ Amplifier (Each Unit)

CHARACTERISTICS

Plate-Supply Voltage	135	volts
Cathode-Bias Resistor	250	ohms
Amplification Factor	2	
Plate Resistance (Approx.)	280	ohms
Transconductance	7000	μmhos
Plate Current	125	mA

DC Amplifier (Each Unit)

MAXIMUM RATINGS (Design-Center Values)

Plate Voltage	250	volts
Plate Current	125	mA
Plate Dissipation	13	watts

■ Operation with fixed bias is not recommended.

Booster Scanning Service (Each Unit)

For operation in a 525-line, 30-frame system

MAXIMUM RATINGS (Design-Center Values)

Peak Negative-Pulse Plate Voltage	1700	volts
DC Plate Current	125	mA
Plate Dissipation	13	watts

MAXIMUM CIRCUIT VALUES

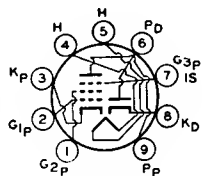
- Grid-Circuit Resistance:
 For cathode-bias operation 1.0 megohm
 For fixed-bias operation Not recommended
- As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.
- The duration of the voltage pulse must not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.

6AS7GA

Refer to chart at end of section.

6AS8**DIODE—
SHARP-CUTOFF PENTODE**

Miniature type used in television and radio receiver applications. The pentode unit is used as an if amplifier, video amplifier, or age amplifier. The high-perveance diode is used as an audio detector, video detector, or dc restorer. Outlines section, 6B; requires miniature 9-contact socket. For curve of average plate characteristics of pentode unit, see type 6AN8A.

**9DS**

Heater Voltage (ac/dc)	6.3	volts
Heater Current	0.45	ampere
Heater Warm-up Time (Average)	—	seconds
Heater-Cathode Voltage:		
Peak value	±200 max	volts
Average value	100 max	volts
Direct Interelectrode Capacitances:		
Diode Unit:		
Plate to Cathode, Heater, Pentode Grid No.3, and Internal Shield	3	pF
Pentode Unit:		
Grid No.1 to Plate	0.03	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	7	pF
Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	2.4	pF
Pentode Grid No.1 to Diode Plate	0.005 max	pF
Pentode Plate to Diode Cathode	0.15 max	pF
Pentode Plate to Diode Plate	0.10 max	pF

Pentode Unit as Class A₁ Amplifier**MAXIMUM RATINGS (Design-Center Values)**

Plate Voltage	300	volts
Grid-No.3 (Suppressor-Grid) Voltage, Positive value	0	volts
Grid-No.2 Supply Voltage	300	volts
Grid-No.2 (Screen-Grid) Voltage	See curve page 300	
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	volts
Plate Dissipation	2.5	watts
Grid-No.2 Input:		
For grid-No.2 voltages up to 150 volts	0.5	watt
For grid-No.2 voltages between 150 and 300 volts	See curve page 300	

CHARACTERISTICS

Plate Supply Voltage	200	volts
Grid No.3	Connected to cathode at socket	
Grid-No.2 Supply Voltage	150	volts
Cathode-Bias Resistor	180	ohms
Plate Resistance (Approx.)	300000	ohms
Transconductance	6200	μmhos
Plate Current	9.5	mA
Grid-No.2 Current	3	mA
Grid-No.1 Voltage (Approx.) for plate current of 10 μA	—8	volts

MAXIMUM CIRCUIT VALUES

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