

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

	Triode Unit	Pentode Unit	
Plate Voltage	330	330	volts
Grid-No.2 (Screen-Grid) Voltage	—	See curve page 98	
Grid-No.2 Supply Voltage	—	330	volts
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	0	volts
Plate Dissipation	2.4	3	watts
Grid-No.2 Input:			
For grid-No.2 voltages up to 165 volts	—	0.6	watt
For grid-No.2 voltages between 165 and 330 volts	—	See curve page 98	

CHARACTERISTICS

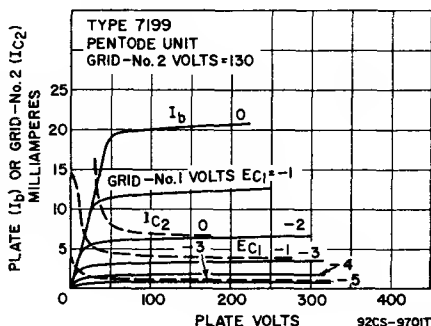
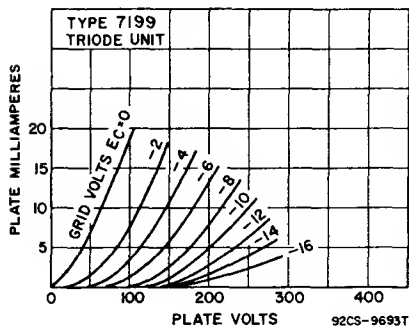
	Triode Unit	Pentode Unit	
Plate Supply Voltage	215	100	220
Grid-No.2 Supply Voltage	—	50	130
Grid-No.1 Voltage	—8.5	—	—
Cathode-Bias Resistor	—	1000	62
Amplification Factor	17	—	—
Plate Resistance (Approx.)	0.0081	1	0.4
Transconductance	2100	1500	7000
Plate Current	9	1.1	12.5
Grid-No.2 Current	—	0.35	3.5
Grid-No.1 Voltage (Approx.) for plate current of 10 μ A	—40	—4	—
			volts

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:*

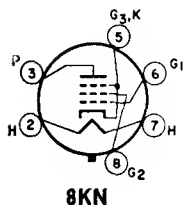
	Triode Unit	Pentode Unit	
For fixed-bias operation	0.5	0.25	megohm
For cathode-bias operation	1	1	megohm

* If either unit is operated at maximum rated conditions, grid-No.1-circuit resistance for both units should not exceed the stated value.



Refer to chart at end of section.

7247



POWER PENTODE

7355

Glass octal type used in the power-output stage of high-fidelity audio-frequency amplifier systems. Outlines section, 13F; requires octal socket. Heater: volts (ac/dc), 6.3; amperes, 0.8; maximum heater-cathode volts, ± 200 peak, 100 average.

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

Plate Voltage	500	volts
Grid-No.2 (Screen-Grid) Voltage	400	volts
Grid-No.2 Supply Voltage	—	—
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	volts
Average Cathode Current	100	mA
Plate Dissipation	18	watts
DC Grid-No.2 Input	3.5*	volts

TYPICAL OPERATION AND CHARACTERISTICS

Plate Voltage	250	volts
Grid-No.2 Voltage	225	volts
Grid-No.1 Voltage	—15	volts
Peak AF Grid-No.1 Voltage	15	volts
Plate Resistance (Approx.)	42000	ohms
Transconductance	7600	μ mhos
Zero-Signal Plate Current	62	mA
Maximum Signal Plate Current	74	mA
Zero-Signal Grid-No.2 Current	3.2	mA
Maximum-Signal Grid-No.2 Current	16.5	mA
Load Resistance	2500	ohms
Total Harmonic Distortion (Approx.)	15	per cent
Maximum-Signal Power Output	9	watts
Grid-No.1 Voltage (Approx.) for plate current of 500 μ A	—35	volts

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.3	megohm
For cathode-bias operation	1	megohm

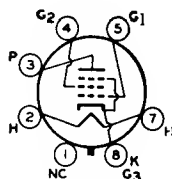
* Grid-No.2 input may reach 7 watts during peak levels of speech and music signals.

Push-Pull Class AB₁ Amplifier**MAXIMUM RATINGS** (Same as for class A₁ amplifier)**TYPICAL OPERATION** (Values are for two tubes)

Plate Voltage	300	400	volts
Grid-No.2 Voltage	250	300	volts
Grid-No.1 Voltage	—21	—34	volts
Peak AF Grid-No.1 Voltage	42	60	volts
Zero-Signal Plate Current	100	56	mA
Maximum-Signal Plate Current	185	175	mA
Zero-Signal Grid-No.2 Current	5.5	3.5	mA
Maximum-Signal Grid-No.2 Current	24	24	mA
Effective Load Resistance (Plate-to-plate)	4000	5000	ohms
Total Harmonic Distortion	2	6	per cent
Maximum-Signal Power Output	28.5	40	watts

7408**BEAM POWER TUBE**

Glass octal type used as output amplifier tube in high-quality sound systems. Outlines section, 13D; requires octal socket.

**7AC**

Heater Voltage (ac/dc)	6.3	volts
Heater Current	0.45	ampere
Heater-Cathode Voltage:		
Peak value	± 200	volts
Average value	100	volts
Direct Interelectrode Capacitances:		
Grid No.1 to Plate	0.7	pF
Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3	9	pF
Plate to Cathode, Heater, Grid No.2, and Grid No.3	7.5	pF

Class A₁ Amplifier**MAXIMUM RATINGS** (Design-Maximum Values)

Plate Voltage	350	volts
Grid-No.2 (Screen-Grid) Voltage	315	volts
Grid-No.2 Input	2.2	watts
Plate Dissipation	14	watts

TYPICAL OPERATION AND CHARACTERISTICS

Plate Voltage	60	250	volts
Grid-No.2 Voltage	250	250	volts
Grid-No.1 (Control-Grid) Voltage	0	—12.5	volts
Peak AF Grid-No.1 Voltage	—	12.5	volts
Zero-Signal Plate Current	100*	45	mA
Maximum-Signal Plate Current	—	47	mA
Zero-Signal Grid-No.2 Current	22*	4.5	mA
Maximum-Signal Grid-No.2 Current	—	7	mA
Plate Resistance (Approx.)	—	50000	ohms
Transconductance	—	4100	μ mhos
Load Resistance	—	5000	ohms
Total Harmonic Distortion	—	7	per cent
Maximum-Signal Power Output	—	4.5	watts