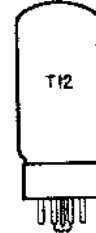
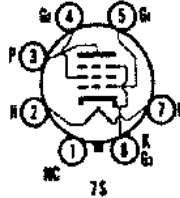


# AUDIO POWER AMPLIFIER or VOLTAGE REGULATOR

# 8417

## Beam Power Pentode

Construction .....Octal T-12  
 Base .....Octal 6 Pin, B6-22  
 Basing.....7S  
 Outline  
 Maximum Diameter .....1.562 In.  
 Maximum Seated Height .....3.875 in.  
 Maximum Overall Height .....4.500 In.



## ELECTRICAL DATA

### HEATER OPERATION

Heater Voltage.....	6.3 Volts
Heater Current.....	1600 Ma
Maximum Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	
Total DC and Peak.....	200 Volts
Heater Positive with Respect to Cathode	
DC.....	100 Volts
Total DC and Peak.....	200 Volts

### DIRECT INTERELECTRODE CAPACITANCES

Grid No. 1 to Plate.....	0.9 Pf
Input.....	22 Pf
Output.....	9.0 Pf

### RATINGS (Design Maximum Rating System)

Plate Voltage (Max.).....	660 Volts
Grid No. 2 Voltage (Max.).....	500 Volts
Plate Dissipation (Max.) <sup>(1)</sup> .....	35 Watts
Grid No. 2 Dissipation (Max.) <sup>(2)</sup> .....	5 Watts

Cathode Current (Max.).....	200 Ma
Grid No. 1 Circuit Resistance	
Fixed Bias (Max.) .....	0.1 Megohm
Cathode Bias (Max.) .....	0.25 Megohm

**CHARACTERISTICS AND TYPICAL OPERATION**

Plate Voltage .....	300 Volts
Grid No. 2 Voltage .....	300 Volts
Grid No. 1 Voltage .....	-12 Volts
Plate Current .....	100 Ma
Grid No. 2 Current .....	5.5 Ma
Transconductance .....	23,000 $\mu$ mhos
Plate Resistance.....	16,000 Ohms
Amplification Factor (Triode Connected) .....	16.5
Grid Voltage for $I_b = 1$ Ma.....	-37 Volts

**Class AB1 Ultra-Linear Push-Pull<sup>(1)</sup>**

**Values for 2 Tubes**

Plate Supply Voltage.....	445 Volts
Grid No. 1 Voltage .....	-25 Volts
Peak AF Grid to Grid Voltage .....	45 Volts
Zero Signal Plate Current .....	146 Ma
Maximum Load (Plate to Plate) .....	3500 Ohms
Total Harmonic Distortion .....	2.5 Percent
Maximum Signal Power Output .....	70 Watts

**Class AB1 Pentode Connected**

**Values for 2 Tubes**

Plate Supply Voltage.....	400	560 Volts
Grid No. 2 Supply Voltage.....	275	300 Volts
Grid No. 1 Voltage .....	-13	-15 Volts
Peak AF Grid to Grid Voltage .....	24	29 Volts
Zero Signal Plate Current .....	150	124 Ma
Maximum Signal Plate Current .....	294	290 Ma
Zero Signal Screen Current .....	4.4	3.6 Ma
Maximum Signal Screen Current .....	34	39 Ma
Effective Load (Plate to Plate) .....	2800	4200 Ohms
Total Harmonic Distortion .....	2.5	2.5 Percent
Maximum Signal Power Output .....	65	100 Watts

**NOTES:**

- (1) It is essential to maintain free circulation of air around the tube for proper cooling.
- (2) Grid No. 2 dissipation may reach 8 watts during intervals of maximum speech and music signals.
- (3) Screen tapped at 40% of primary turns. Plate current includes screen current.

**AVERAGE PLATE CHARACTERISTICS**

