

Maximum Signal Plate Current .....	31	36 Ma
Zero Signal Grid No. 2 Current.....	3.5	4.0 Ma
Maximum Signal Grid No. 2 Current .....	7.5	11 Ma
Transconductance .....	8100	9200 $\mu$ mhos
Plate Resistance (Approx.) .....	16,000	15,000 Ohms
Load Resistance .....	3500	4500 Ohms
Maximum Signal Power Output .....	1.1	1.5 Watts
Total Harmonic Distortion (Approx.) .....	5	6 Percent

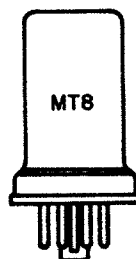
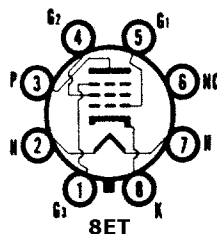
**AUDIO POWER AMPLIFIER**

**6CA7/EL34**

**Beam Pentode**

Construction .....Octal, Metal  
 Base .....Octal 8 Pin  
 Basing .....8ET  
 Outline

Maximum Diameter .....1.500 In.  
 Maximum Seated Height .....3.875 In.  
 Maximum Overall Height .....4.438 In.



**ELECTRICAL DATA**

**HEATER OPERATION**

Heater Voltage.....	6.3 Volts
Heater Current .....	1500 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 (Unshielded)**

Grid No. 1 to Plate .....	1.0 Pf
Input .....	15.5 Pf
Output .....	7.2 Pf

**RATINGS (Design Center Rating System)**

	Triode Conn.	Pentode Conn.
Plate Voltage (Max.) .....	500	800 Volts
Grid No. 2 Voltage (Max.) .....	—	425 Volts
Plate Dissipation (Max.) .....	30	25 Watts
Grid No. 2 Dissipation (Max.) .....	—	8.0 Watts
Cathode Current (Max.).....	—	150 Ma
Grid No. 1 Circuit Resistance Cathode Bias (Max.) <sup>(1)</sup> .....	0.7	0.7 Megohm

**CHARACTERISTICS AND TYPICAL OPERATION**

	Triode Operation Push-Pull	Pentode Operation Single Tube	
Plate Voltage .....	400	265	300 Volts
Grid No. 2 Voltage .....	—	250	300 Volts
Cathode Resistor .....	220	—	190 Ohms
Grid No. 1 Voltage .....	—	-13.5	— Volts
A-F Grid Voltage (RMS) .....	—	8.7	8.2 Volts
Zero Signal Plate Current.....	130	100	83 Ma
Max. Signal Plate Current .....	142	—	— Ma
Zero Signal Grid No. 2 Current.....	—	15	13 Ma
Transconductance .....	—	11K	— $\mu$ mhos
Plate Resistance.....	—	15K	— Ohms
Load Resistance .....	5K	2K	3.5K Ohms
Power Output .....	16.5	11	11 Watts
Total Harmonic Distortion .....	3	10	10 Percent

**Class AB1 Push-Pull (Pentode Operation)**

Plate Voltage .....	375	450	400 Volts
Grid No. 2 Voltage .....	375	450	400 Volts
Grid No. 2 Resistor .....	470	1000	800 Ohms

Grid No. 1 Voltage .....	—	—	-36 Volts
Cathode Resistor .....	130	232	— Ohms
A-F Grid Voltage (RMS) .....	20	27	25 Volts
Zero Signal Plate Current.....	150	120	60 Ma
Maximum Signal Plate Current .....	188	143	221 Ma
Zero Signal Grid No. 2 Current.....	25	20	9 Ma
Maximum Signal Grid No. 2 Current .....	39	44	46 Ma
Load Resistance (P to P) .....	3.5K	6.5K	3.5K Ohms
Power Output .....	35	40	54 Watts
Total Harmonic Distortion .....	1.7	5.1	1.6 Percent

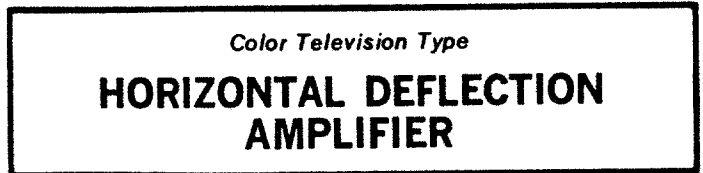
**Class AB1 Push-Pull (Ultra-Linear Operation)**

**Grid No. 2 at 43% of Primary Winding**

Plate Voltage .....	430	430	430 Volts
Cathode Resistor .....	235	235	235 Ohms
A-F Grid Voltage (RMS) .....	17.5	25	25 Volts
Zero Signal Plate Current.....	125	125	125 Ma
Maximum Signal Plate Current .....	130	140	140 Ma
Zero Signal Grid No. 2 Current.....	20	20	20 Ma
Maximum Signal Grid No. 2 Current .....	20.4	28	28 Ma
Load Resistance (P to P) .....	6K	6K	6K Ohms
Power Output .....	20	34	34 Watts
Total Harmonic Distortion .....	0.35	2.5	2.5 Percent

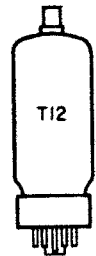
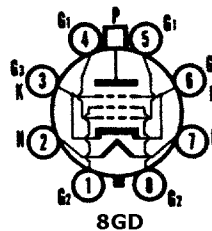
**NOTE:**

(1) The maximum permissible limit for Grid No. 1 Resistor in a Class B Circuit is 0.5 Megohm.



**Beam Power Pentode**

Construction .....	Octal T-12
Base .....	Octal 8 Pin
Top Cap .....	C1-1
Basing .....	.8GD
Outline .....	12-21
Maximum Diameter .....	1.563 In.
Maximum Seated Height .....	4.250 In.
Maximum Overall Height .....	5.000 In.



**ELECTRICAL DATA**

**HEATER OPERATION**

Heater Voltage.....	6.3 Volts
Heater Current .....	2500 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 (Unshielded)**

Grid to Plate .....	0.4 Pf
Input .....	22 Pf
Output .....	10 Pf

**RATINGS (Design Maximum Rating System)**

**Horizontal Deflection Amplifier<sup>(1)</sup>**

Plate Supply Voltage (DC and Boost) (Max.) .....	800 Volts
Peak Positive Pulse Plate Voltage (Abs. Max.).....	6800 Volts
Plate Dissipation (Max.) .....	23 Watts
Peak Negative Pulse Plate Voltage (Max.) .....	-1650 Volts
DC Grid No. 2 Voltage (Max.) .....	220 Volts
DC Grid No. 1 Voltage (Max.) .....	-55 Volts
Grid No. 2 Dissipation (Max.) .....	4 Watts
Peak Negative Pulse Grid No. 1 Voltage (Max.) .....	220 Volts
DC Plate Current (Max.) .....	240 Ma
Grid No. 1 Circuit Resistance (Max.) .....	0.47 Megohm
Bulb Temperature (At Hottest Point) (Max.) .....	220 °C