

# Beam Power Tube

**9-PIN MINIATURE TYPE**  
**For High-Fidelity Audio-**  
**Amplifier Applications**

## GENERAL DATA

### Electrical:

Heater, for Unipotential Cathode:		
Voltage (AC or DC) . . . . .	6.3 ± 10%	volts ←
Current at 6.3 volts. . . . .	0.45	amp
Direct Interelectrode Capacitances: <sup>0</sup>		
Grid No.1 to plate. . . . .	0.4 max.	μmf ←
Grid No.1 to cathode & grid No.3, grid No.2, and heater . . . . .	9	μmf
Plate to cathode & grid No.3, grid No.2, and heater . . . . .	6	μmf

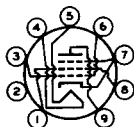
### Characteristics, Class A<sub>1</sub> Amplifier:

Plate Voltage . . . . .	250	volts
Grid-No.2 Voltage . . . . .	250	volts
Grid-No.1 Voltage . . . . .	-15	volts
Plate Resistance (Approx.) . . . . .	73000	ohms
Transconductance. . . . .	4800	μmhos
Plate Current . . . . .	46	ma
Grid-No.2 Current . . . . .	3.5	ma
Grid-No.1 Voltage (Approx.) for plate μa = 100. . . . .	-40	volts

### Mechanical:

Operating Position. . . . .	Any
Maximum Overall Length. . . . .	3-1/16"
Maximum Seated Length. . . . .	2-13/16"
Length, Base Seat to Bulb Top (Excluding tip) 2-7/16" ± 3/32"	
Maximum Diameter. . . . .	0.750" to 0.875"
Dimensional Outline . . . . .	See <i>General Section</i>
Bulb. . . . .	T6-1/2
Base. . . . .	Small-Button Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW. . . . .	9EU

Pin 1 - Grid No.2  
 Pin 2 - No Connection  
 Pin 3 - Grid No.1  
 Pin 4 - Heater  
 Pin 5 - Heater



Pin 6 - Grid No.1  
 Pin 7 - Grid No.3,  
 Cathode  
 Pin 8 - Grid No.2  
 Pin 9 - Plate

### PUSH-PULL AF POWER AMPLIFIER — Class AB<sub>1</sub>

#### Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE . . . . .	440 max.	volts ←
GRID-No.2 (SCREEN-GRID) VOLTAGE . . . . .	330 max.	volts

← Indicates a change.



GRID-No.2 INPUT. . . . .	2	max.	watts
PLATE DISSIPATION. . . . .	12	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode. . . . .	200	max.	volts
Heater positive with respect to cathode. . . . .	200 <sup>▲</sup>	max.	volts
BULB TEMPERATURE (At hottest point			
on bulb surface) . . . . .	250	max.	°C

### Typical Operation with Fixed Bias:

*Values are for 2 tubes*

Plate Voltage. . . . .	250	350	400	volts
Grid-No.2 Voltage. . . . .	250	280	290	volts
Grid-No.1 (Control-Grid) Voltage <sup>•</sup> . . . . .	-15	-22	-25	volts
Peak AF Grid-No.1-to-Grid-No.1				
Voltage. . . . .	30	44	50	volts
Zero-Signal Plate Current. . . . .	92	58	50	ma
Max.-Signal Plate Current. . . . .	105	106	107	ma
Zero-Signal Grid-No.2 Current. . . . .	7	3.5	2.5	ma
Max.-Signal Grid-No.2 Current. . . . .	16	14	13.7	ma
Effective Load Resistance (Plate				
to plate). . . . .	8000	7500	8000	ohms
Total Harmonic Distortion. . . . .	2	1.5	2	%
Max.-Signal Power Output . . . . .	12.5	20	24	watts

### Typical Operation with Cathode Bias:

*Values are for 2 tubes*

Plate Supply Voltage . . . . .	300	310	volts
Grid-No.2 Supply Voltage . . . . .	300	310	volts
Cathode Resistor . . . . .	230	270	ohms
Peak AF Grid-No.1-to-Grid-No.1 Voltage . . . . .	48	55	volts
Zero-Signal Plate Current. . . . .	80	77	ma
Max.-Signal Plate Current. . . . .	96	92	ma
Zero-Signal Grid-No.2 Current. . . . .	6	5	ma
Max.-Signal Grid-No.2 Current. . . . .	14	14	ma
Effective Load Resistance (Plate			
to plate). . . . .	5500	6000	ohms
Total Harmonic Distortion. . . . .	2	4	%
Max.-Signal Power Output . . . . .	15	17	watts

### Maximum Circuit Values:

Grid-No.1-Circuit Resistance: <sup>•</sup>		
For fixed-bias operation . . . . .	0.5	max. megohm
For cathode-bias operation . . . . .	1	max. megohm

### PUSH-PULL AF POWER AMPLIFIER — Class AB<sub>1</sub>

*Grid No.2 of each tube connected to tap on plate winding of output transformer*

#### → Maximum Ratings, Design-Maximum Values:

PLATE AND GRID-No.2 (SCREEN-GRID)		
SUPPLY VOLTAGE . . . . .	410	max. volts

→ Indicates a change.

