

## Beam Power Tube

### FORCED-AIR COOLED

#### GENERAL DATA

#### Electrical:

Filament, Thoriated Tungsten:

Voltage (AC or DC) . . . . .  $5 \pm 5\%$  volts  
 Current at 5 volts . . . . . 14.5 amp

Transconductance, for plate volts =  
 2500, grid-No.2 volts = 500, and  
 plate ma. = 100 . . . . . 4000  $\mu$ hos

Mu-Factor, Grid No.2 to Grid No.1 . . . . . 5.1

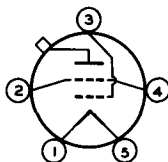
Direct Interelectrode Capacitances  
 (Approx.):

Grid No.1 to plate . . . . . 0.12  $\mu$ f  
 Grid No.1 to filament, grid No.2,  
 and base shell . . . . . 13  $\mu$ f  
 Plate to filament, grid No.2,  
 and base shell . . . . . 4.6  $\mu$ f

#### Mechanical:

Operating Position . . . . . Vertical, base down ←  
 Maximum Overall Length . . . . . 6-3/8"  
 Seated Length . . . . . 5-3/8"  $\pm$  1/4"  
 Maximum Diameter . . . . . 3-9/16"  
 Weight (Approx.) . . . . . 9 oz  
 Cap . . . . . Skirted Small (JEDEC No.C1-22)  
 Base<sup>a</sup> . . . . . Special Metal-Shell Giant 5-Pin  
 Basing Designation for BOTTOM VIEW . . . . . 5BK

Pin 1 - Filament  
 Pin 2 - Grid No.2  
 Pin 3 - Grid No.1



Pin 4 - Grid No.2  
 Pin 5 - Filament  
 Cap - Plate

#### Thermal:

Forced-Air Cooling:

Upward through base toward bulb:

Base-cooling air flow from a small fan or centrifugal blower should be applied simultaneously with filament power. In continuous service 15 cfm at a static pressure of 0.4 inch of water are required through the base when the recommended socket and chimney are used.

Base-Seal Temperature . . . . . 200 max. °C  
 Plate-Seal Temperature . . . . . 225 max. °C

← Indicates a change.



# 4-400A

## → Components:

Socket. . . . Johnson 122-275, National HX-100, or equivalent  
Chimney . . . . . Penta Labs PL-C1, or equivalent  
Heat-Radiating Plate Connector. . . Eimac HR-6, or equivalent

### AF POWER AMPLIFIER & MODULATOR — Class AB

#### Maximum CCS<sup>b</sup> Ratings, Absolute-Maximum Values:

DC PLATE VOLTAGE. . . . .	4000 max.	volts
DC GRID-No.2 (SCREEN-GRID) VOLTAGE. . .	800 max.	volts
MAX.-SIGNAL DC PLATE CURRENT <sup>c</sup> . . . . .	350 max.	ma
GRID-No.2 INPUT <sup>c</sup> . . . . .	35 max.	watts
GRID-No.1 (CONTROL-GRID) INPUT <sup>c</sup> . . . .	10 max.	watts
PLATE DISSIPATION <sup>c</sup> . . . . .	400 max.	watts

### PLATE-MODULATED RF POWER AMPLIFIER — Class C Telephony

*Carrier conditions per tube for use  
with a maximum modulation factor of 1*

#### Maximum CCS<sup>b</sup> Ratings, Absolute-Maximum Values:

*At frequencies up to 110 Mc*

DC PLATE VOLTAGE. . . . .	3200 max.	volts
DC GRID-No.2 VOLTAGE. . . . .	600 max.	volts
DC GRID-No.1 VOLTAGE. . . . .	-500 max.	volts
DC PLATE CURRENT. . . . .	275 max.	ma
GRID-No.2 INPUT . . . . .	35 max.	watts
GRID-No.1 INPUT . . . . .	10 max.	watts
PLATE DISSIPATION . . . . .	270 max.	watts

### RF POWER AMPLIFIER & OSCILLATOR — Class C Telegraphy<sup>d</sup> and

### RF POWER AMPLIFIER — Class C FM Telephony

#### Maximum CCS<sup>b</sup> Ratings, Absolute-Maximum Values:

*At frequencies up to 110 Mc*

DC PLATE VOLTAGE. . . . .	4000 max.	volts
DC GRID-No.2 VOLTAGE. . . . .	600 max.	volts
DC GRID-No.1 VOLTAGE. . . . .	-500 max.	volts
DC PLATE CURRENT. . . . .	350 max.	ma
GRID-No.2 INPUT . . . . .	35 max.	watts
GRID-No.1 INPUT . . . . .	10 max.	watts
PLATE DISSIPATION . . . . .	400 max.	watts

<sup>a</sup> Metal base shell should be grounded by means of suitable spring fingers.

<sup>b</sup> Continuous Commercial Service.

<sup>c</sup> Averaged over any audio-frequency cycle of sine-wave form.

<sup>d</sup> Key-down conditions per tube without amplitude modulation. Amplitude modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115 per cent of the carrier conditions.

→ Indicates a change.

