

## Beam Power Tube

Operates at Maximum Ratings up to 150 Mc, and with Reduced Ratings at Higher Frequencies. Forced-Air Cooling may be Required Above 50 Mc.

### GENERAL DATA

#### Electrical:

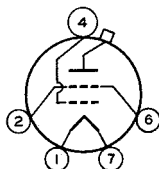
	Min.	Av.	Max.	
Filament, Thoriated Tungsten:				
Voltage (AC or DC) . . . . .	-	6 <sup>a</sup>	-	volts
Current at filament volts=6 . . . . .	3.2		3.8	amp
Mu-Factor, Grid No.2 to Grid No.1 . . . . .	5	-	7	
Direct Interelectrode Capacitances (Approx.):				
Grid No.1 to plate . . . . .	-	-	0.12	pf
Grid No.1 to filament and grid No.2 . . . . .	6	-	8.5	pf
Plate to filament and grid No.2 . . . . .	1.9	-	2.6	pf

#### Mechanical:

Operating Position . . . . .	Vertical, base up or down
Maximum Overall Length . . . . .	4-3/16"
Maximum Diameter . . . . .	2-3/8"
Weight (Approx.) . . . . .	3 oz
Cap. . . . .	Skirted Small (JEDEC No.C1-22)
Base . . . . .	Special-Button Septar 5-Pin

BOTTOM VIEW

Pin 1 - Filament  
Pin 2 - Grid No.2  
Pin 4 - Grid No.1



Pin 6 - Grid No.2  
Pin 7 - Filament  
Cap - Plate

#### Thermal:

Seal Temperatures . . . . .	200 max.	°C
Bulb Temperature . . . . .	225 max.	°C

Adequate ventilation around the tube must be provided to prevent the temperatures of the bulb and seals from exceeding the specified maximum values.

#### Components:

Socket . . . . Johnson 122-101, National HX-29, or equivalent  
Heat-Radiating Plate Connector . . . . Eimac HR-6, or equivalent



# 8165/4-65A

## AF POWER AMPLIFIER & MODULATOR — Class AB<sub>1</sub><sup>b</sup>

Maximum CCS<sup>c</sup> Ratings, *Absolute-Maximum Values:*

DC PLATE VOLTAGE. . . . .	3000 max.	volts
DC GRID-No.2 VOLTAGE. . . . .	600 max.	volts
DC PLATE CURRENT. . . . .	150 max.	ma
GRID-No.2 INPUT . . . . .	10 max.	watts
PLATE DISSIPATION . . . . .	65 max.	watts

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

Maximum CCS Ratings, *Absolute-Maximum Values:*

*At frequencies up to 150 Mc*

DC PLATE VOLTAGE. . . . .	3000 max.	volts
DC GRID-No.2 VOLTAGE. . . . .	400 max.	volts
DC GRID-No.1 VOLTAGE. . . . .	-500 max.	volts
DC PLATE CURRENT. . . . .	150 max.	ma
GRID-No.2 INPUT . . . . .	10 max.	watts
GRID-No.1 INPUT . . . . .	5 max.	watts
PLATE DISSIPATION . . . . .	65 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 Ratings, *Absolute-Maximum Values:*

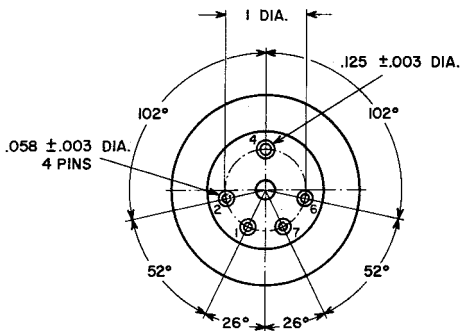
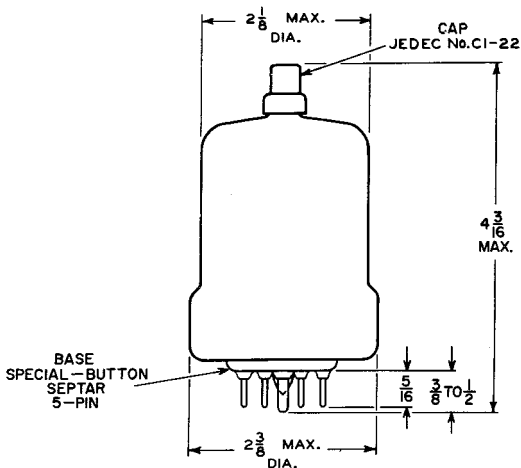
*At frequencies up to 150 Mc*

DC PLATE VOLTAGE. . . . .	2500 max.	volts
DC GRID-No.2 VOLTAGE. . . . .	400 max.	volts
DC GRID-No.1 VOLTAGE. . . . .	-500 max.	volts
DC PLATE CURRENT. . . . .	120 max.	ma
GRID-No.2 INPUT . . . . .	10 max.	watts
GRID-No.1 INPUT . . . . .	5 max.	watts
PLATE DISSIPATION . . . . .	45 max.	watts

- <sup>a</sup> The filament voltage, as measured at the filament pins, should be 6.0 volts. For long life, excursions from this value should not exceed  $\pm 5$  per cent.
- <sup>b</sup> Subscript 1 indicates that grid-No.1 current does not flow during any part of the input cycle.
- <sup>c</sup> Continuous Commercial Service.
- <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.



# 8165/4-65A



92CS-7156R3

ALL DIMENSIONS IN INCHES

