8165/4-65A

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

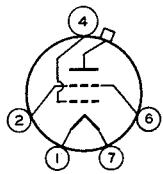
Electrical:

	Min.	*Av.*	*Max.*	
Filament, Thoriated Tungsten:				
Voltage (AC or DC)	-	6[a]	-	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

AF POWER AMPLIFIER & MODULATOR — Class AB_1[b]

Maximum CCS[c] 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[d] 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

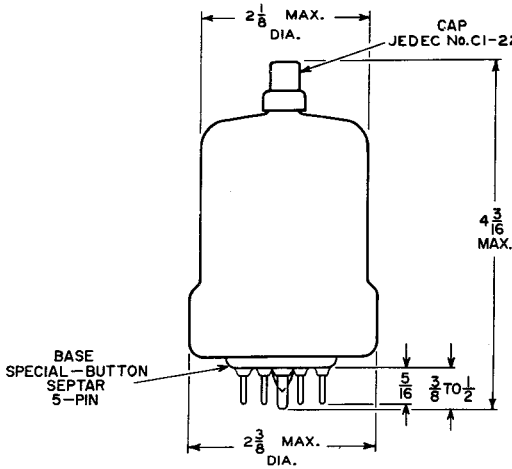
DC PLATE VOLTAGE	2500 max.	volts
DC GRID-No.2 VOLTAGE	400 max.	volts
DC GRID-No.1 VOLTAGE	-500 max.	volts
DC PLATE CURRENT	120 max.	ma
GRID-No.2 INPUT	10 max.	watts
GRID-No.1 INPUT	5 max.	watts
PLATE DISSIPATION	45 max.	watts

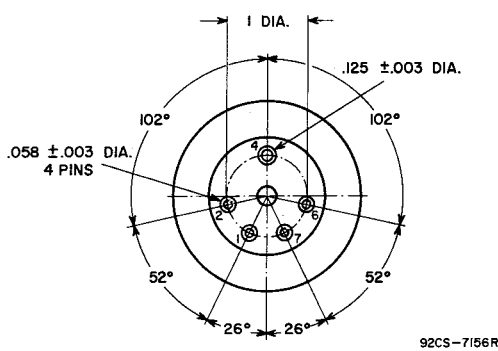
[a] The filament voltage, as measured at the filament pins, should be 6.0 volts. For long life, excursions from this value should not exceed ± 5 per cent.

[b] Subscript 1 indicates that grid-No.1 current does not flow during any part of the input cycle.

[c] Continuous Commercial Service.

[d] 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.





ALL DIMENSIONS IN INCHES