

# 6FW5

## Beam Power Tube

### GENERAL DATA

#### Electrical:

Heater Characteristics and Ratings (*Design-Maximum Values*):

Voltage (AC or DC) . . . . .  $6.3 \pm 0.6$  volts  
Current at heater volts = 6.3 . . . 1.200 amp

Peak heater-cathode voltage:

Heater negative with  
respect to cathode. . . . . 200 max. volts  
Heater positive with  
respect to cathode. . . . . 200<sup>a</sup> max. volts

Direct Interelectrode Capacitances

(Approx.):<sup>b</sup>

Grid No.1 to plate. . . . . 0.5  $\mu\text{f}$   
Grid No.1 to cathode & grid No.3,  
grid No.2, and heater . . . . . 15.0  $\mu\text{f}$   
Plate to cathode & grid No.2,  
grid No.2, and heater . . . . . 7.0  $\mu\text{f}$

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

|                                                                                                                                    |                  |       |       |                  |
|------------------------------------------------------------------------------------------------------------------------------------|------------------|-------|-------|------------------|
| Plate Voltage . . . . .                                                                                                            | 60               | 150   | 250   | volts            |
| Grid-No.2 Voltage . . . . .                                                                                                        | 150              | 150   | 150   | volts            |
| Grid-No.1 Voltage . . . . .                                                                                                        | 0                | -22.5 | -22.5 | volts            |
| Amplification Factor . . . . .                                                                                                     | -                | 4.4   | -     |                  |
| Plate Resistance (Approx.) . . . . .                                                                                               | -                | -     | 18000 | ohms             |
| Transconductance . . . . .                                                                                                         | -                | -     | 7300  | $\mu\text{mhos}$ |
| Plate Current . . . . .                                                                                                            | 345 <sup>c</sup> | -     | 65    | ma               |
| Grid-No.2 Current . . . . .                                                                                                        | 27 <sup>c</sup>  | -     | 1.8   | ma               |
| Grid-No.1 Voltage (Approx.)<br>for plate ma. = 1 . . . . .                                                                         | -                | -     | -42   | volts            |
| Grid-No.1 Voltage (Approx.)<br>for peak positive-pulse plate<br>volts = 5000, grid-No.2 volts<br>= 150, and plate ma. = 1. . . . . | -                | -     | -100  | volts            |

#### Mechanical:

Operating Position. . . . . Any  
Type of Cathode . . . . . Coated Unipotential  
Maximum Overall Length. . . . . 3-7/8"  
Maximum Seated Length . . . . . 3-5/16"  
Diameter. . . . . 1.438" to 1.562"  
Bulb. . . . . T12  
Base. . . . . Short Medium-Shell Octal 6-Pin  
with External Barriers, Arrangement 1, Style A,  
(JEDEC Group 1. No. B6-112)



RADIO CORPORATION OF AMERICA  
Electron Tube Division

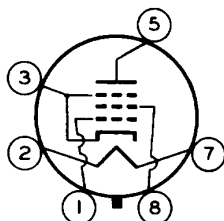
Harrison, N. J.

DATA  
5-62

# 6FW5

Basing Designation for BOTTOM VIEW. . . . . 6CK

Pin 1—Grid No.1  
Pin 2—Heater  
Pin 3—Cathode,  
Grid No.3



Pin 5—Plate  
Pin 7—Heater  
Pin 8—Grid No.2

## HORIZONTAL-DEFLECTION AMPLIFIER

### Maximum Ratings, Design-Maximum Values:

*For operation in a 525-line, 30-frame system<sup>d</sup>*

|                                                                 |           |       |
|-----------------------------------------------------------------|-----------|-------|
| DC PLATE VOLTAGE. . . . .                                       | 770 max.  | volts |
| PEAK POSITIVE-PULSE PLATE VOLTAGE <sup>e</sup> . . .            | 6500 max. | volts |
| DC GRID-No.2 (SCREEN-GRID) VOLTAGE. . .                         | 220 max.  | volts |
| PEAK NEGATIVE-PULSE GRID-No.1 VOLTAGE .                         | 330 max.  | volts |
| DC GRID-No.1 (CONTROL-GRID) VOLTAGE . .                         | -55 max.  | volts |
| CATHODE CURRENT:                                                |           |       |
| Peak. . . . .                                                   | 610 max.  | ma    |
| Average . . . . .                                               | 175 max.  | ma    |
| GRID-No.2 INPUT . . . . .                                       | 3.6 max.  | watts |
| PLATE DISSIPATION <sup>f</sup> . . . . .                        | 18 max.   | watts |
| BULB TEMPERATURE (At hottest point<br>on bulb surface). . . . . | 220 max.  | °C    |

### Maximum Circuit Values:

|                                       |        |        |
|---------------------------------------|--------|--------|
| Grid-No.1—Circuit Resistance. . . . . | 1 max. | megohm |
|---------------------------------------|--------|--------|

<sup>a</sup> The dc component must not exceed 100 volts.

<sup>b</sup> Without external shield.

<sup>c</sup> This value can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.

<sup>d</sup> As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

<sup>e</sup> This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.

<sup>f</sup> An adequate bias resistor or other means is required to protect the tube in the absence of excitation.

