



IOFP4-A

# IOFP4-A KINESCOPE

METAL-BACKED FLUORESCENT SCREEN

MAGNETIC FOCUS

MAGNETIC DEFLECTION

## DATA

### General:

Heater, for Unipotential Cathode:

Voltage. . . . . 6.3 . . . . . ac or dc volts

Current. . . . . 0.6 . . . . . amp

Direct Interelectrode Capacitances:

Grid No.1 to All Other Electrodes. . . . . 6  $\mu\text{f}$ Cathode to All Other Electrodes. . . . . 5  $\mu\text{f}$ External Conductive Coating to Anode . . . . .  $\left\{ \begin{array}{l} 2500 \text{ max.} \\ 500 \text{ min.} \end{array} \right. \mu\text{f}$ 

Face Plate (With about 66% light transmission) . . . . . Filterglass

Phosphor (For Curves, see front of this Section) P4—Sulfide Type

Fluorescence and Phosphorescence . . . . . White

Persistence of Phosphorescence . . . . . Short

Focusing Method. . . . . Magnetic

Deflection Method. . . . . Magnetic

Deflection Angle (Approx.) . . . . .  $50^\circ$ Overall Length . . . . .  $17\text{--}5/8" \pm 3/8"$ Greatest Diameter of Bulb. . . . .  $10\text{--}1/2" \pm 1/8"$ Minimum Useful Screen Diameter . . . . .  $9\text{--}1/8"$ 

Mounting Position. . . . . Any

Cap. . . . . Recessed Small Cavity (JETEC No.J1-21)

Base . . . . . Small-Shell Duodecal 5-Pin (JETEC No.B5-57)

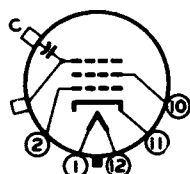
### BOTTOM VIEW

Pin 1—Heater

Pin 2—Grid No.1

Pin 10—Grid No.2

Pin 11—Cathode



Pin 12—Heater

Cap—Anode

C—External  
Conductive  
Coating

### Maximum Ratings, Design-Center Values:

ANODE VOLTAGE. . . . . 12000 max. volts

GRID-No.2 VOLTAGE. . . . . 410 max. volts

GRID-No.1 VOLTAGE:

Negative bias value. . . . . 125 max. volts

Positive bias value. . . . . 0 max. volts

Positive peak value. . . . . 2 max. volts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode:

During equipment warm-up period

not exceeding 15 seconds . . . . . 410 max. volts

After equipment warm-up period . . . . . 140 max. volts

Heater positive with respect to cathode. . . . . 140 max. volts

AUG. 1, 1951

TUBE DEPARTMENT

TENTATIVE DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



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## Typical Operation:

|                                                                        |            |       |
|------------------------------------------------------------------------|------------|-------|
| Anode Voltage*                                                         | 11000      | volts |
| Grid-No.2 Voltage.                                                     | 250        | volts |
| Grid-No.1 Voltage for Visual<br>Extinction of Undelected Focused Spot. | -27 to -63 | volts |
| Focusing-Coil Current (DC, approx.) <sup>•</sup>                       | 110        | ma    |
| Spot Position.                                                         | #          |       |

## Maximum Circuit Values:

|                                        |          |         |
|----------------------------------------|----------|---------|
| Grid-No.1-Circuit Resistance . . . . . | 1.5 max. | megohms |
|----------------------------------------|----------|---------|

- \* Brilliance and definition decrease with decreasing anode voltage. In general, the anode-voltage should not be less than 8000 volts.
- For specimen focusing coil similar to JETEC Focusing Coil No.106 positioned with air gap toward kinescope screen and center line of air gap 3-1/4 inches from Reference Line (see Outline Drawing). The indicated current is for condition with combined grid-No.1 bias voltage and video-signal voltage adjusted to produce a highlight brightness of 50 foot-lamberts on an 8" x 6" picture area sharply focused at center of screen.
- # The center of the undeflected, unfocused spot will fall within a circle having 16-mm radius concentric with the center of the tube face.

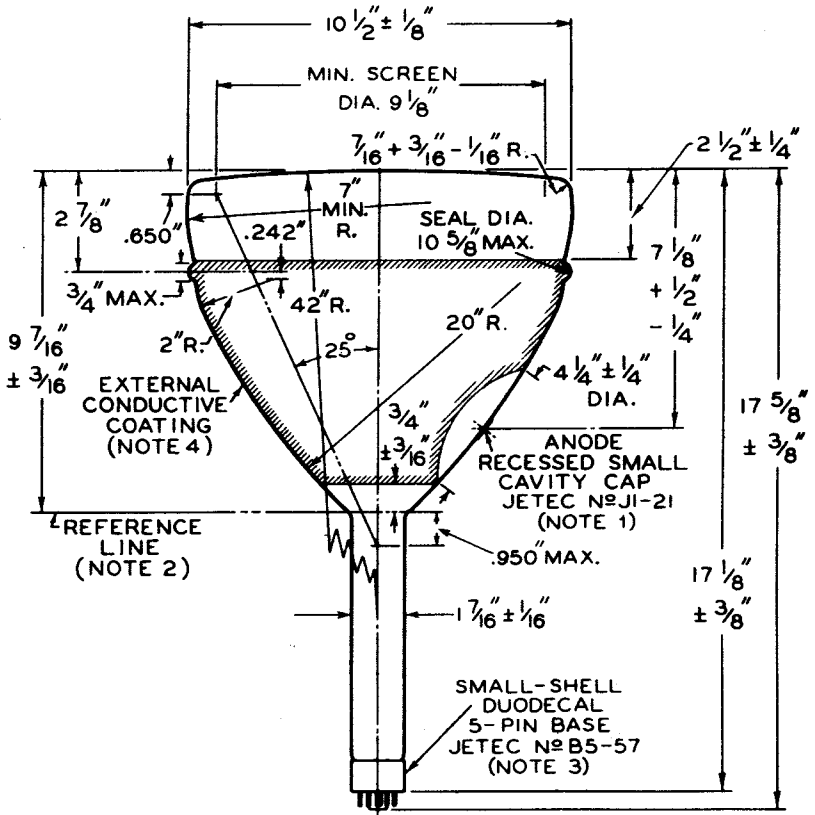
## OPERATING NOTES

**X-Ray Warning.** When operated at or below the maximum ratings shown in the tabulated data, the IOFP4-A does not produce any harmful x-ray radiation. All types of picture tubes may be operated at voltages (if ratings permit) up to 16 kilovolts (absolute value) without personal injury on prolonged exposure at close range. Above 16 kilovolts, special shielding precautions for x-ray radiation may be necessary.



# 10FP4-A KINESCOPE

10FP4-A



92CM - 7629

**NOTE 1:** THE PLANE THROUGH THE TUBE AXIS AND VACANT PIN POSITION No.3 MAY VARY FROM THE PLANE THROUGH THE TUBE AXIS AND ANODE TERMINAL BY AN ANGULAR TOLERANCE (MEASURED ABOUT THE TUBE AXIS) OF  $\pm 10^\circ$ . ANODE TERMINAL IS ON SAME SIDE AS VACANT PIN POSITION No.3.

**NOTE 2:** REFERENCE LINE IS DETERMINED BY POSITION WHERE JETEC REFERENCE-LINE GAUGE No.112 ( $1.500" + .003" - .000"$  I.D. AND 2" LONG) WILL REST ON BULB CONE.

**NOTE 3:** SOCKET FOR THIS BASE SHOULD NOT BE RIGIDLY MOUNTED; IT SHOULD HAVE FLEXIBLE LEADS AND BE ALLOWED TO MOVE FREELY.

**NOTE 4:** EXTERNAL CONDUCTIVE COATING MUST BE GROUND.

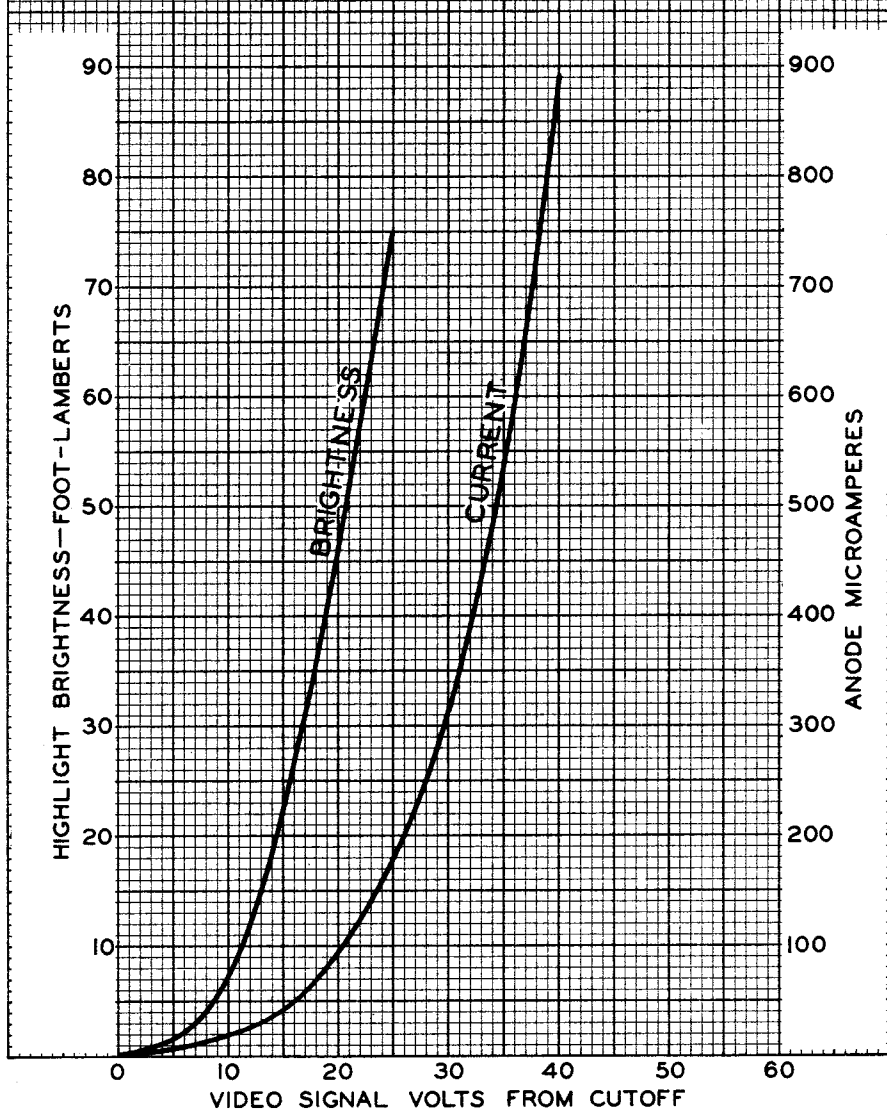
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# AVERAGE GRID-DRIVE CHARACTERISTICS

$E_f = 6.3$  VOLTS  
 ANODE VOLTS = 11000  
 GRID-Nº 2 VOLTS = 250  
 GRID Nº 1 BIASED TO PATTERN CUTOFF  
 FOCUSED RASTER SIZE 8" X 6"



MAR. 29, 1951

TUBE DEPARTMENT  
 RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-7624