



2IFP4-A

2IFP4-A KINESCOPE

RECTANGULAR GLASS TYPE

LOW-VOLTAGE 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 μf Cathode to All Other Electrodes 5 μf External Conductive Coating to Ultor[•] $\begin{cases} 750 \text{ max.} \\ 500 \text{ min.} \end{cases}$ μf

Faceplate, Cylindrical Filterglass

Light Transmission (Approx.) 66%

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

Fluorescence and Phosphorescence White

Persistence of Phosphorescence Short

Focusing Method Electrostatic

Deflection Method Magnetic

Deflection Angles (Approx.):

Diagonal 70°

Horizontal 65°

Vertical 50°

Ion-Trap Gun Requires External, Single-Field Magnet

Tube Dimensions:

Overall Length 23" $\pm$ 3/8"Greatest Diagonal 21-7/32" $\pm$ 3/16"Greatest Width 20-1/4" $\pm$ 3/16"Greatest Height 15-9/16" $\pm$ 3/16"

Minimum Screen Dimensions:

Greatest Width 19-1/8"

Greatest Height 13-7/8"

Diagonal 20-1/16"

Weight (Approx.) 31 lbs

Mounting Position Any

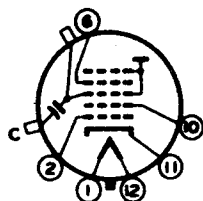
Cap Recessed Small Cavity (JETEC No.J1-21)

Bulb J170

Base Small-Shell Duodecal 6-Pin (JETEC No.B6-63)

BOTTOM VIEW

- Pin 1—Heater
Pin 2—Grid No.1
Pin 6—Grid No.4
Pin 10—Grid No.2
Pin 11—Cathode
Pin 12—Heater



- Cap—Ultor
(Grid No.3,
Grid No.5,
Collector)
C—External
Conductive
Coating

Maximum Ratings, Design-Center Values:ULTOR[•] VOLTAGE 18000 max. volts[•]: See next page.

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TENTATIVE DATA 1



21FP4-A KINESCOPE

GRID-No.4 VOLTAGE:

Positive value 1000 max. volts

Negative value* 500 max. volts

GRID-No.2 VOLTAGE 500 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 180 max. volts

Heater positive with respect to cathode 180 max. volts

Equipment Design Ranges:

For any ultor voltage (E_{c5}) between 14000* and 18000 volts
and grid-No.2 voltage (E_{c2}) between 200 and 500 volts

Grid-No.4 Voltage for Focus

with Ultor Current

of 100 μ amp -0.4% to +2.2% of E_{c5} volts**Grid-No.1 Voltage for**

Visual Extinction of

Undelected Focused Spot 11% to 25.7% of E_{c2} voltsGrid-No.4 Current -25 to +25 μ ampGrid-No.2 Current -15 to +15 μ amp**Field Strength of Single-**

Field Ion-Trap Magnet

(Approx.) $\sqrt{\frac{E_{c5}}{14000}} \times 45$ gaussess**Field Strength of Adjustable**

Centering Magnet

0 to 8 gaussess

Examples of Use of Design Ranges:

For ultor voltage of 14000 16000 volts

and grid-No.2 voltage of 300 300 volts

Grid-No.4 Voltage for Focus

with Ultor Current

of 100 μ amp -55 to +300 -65 to +350 volts**Grid-No.1 Voltage for**

Visual Extinction of Un-

deflected Focus Spot -33 to -77 -33 to -77 volts

Ion-Trap Magnet

(Rated Strength) 45 50 gaussess

Maximum Circuit Values:

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

* The "ultor" in a cathode-ray tube is the electrode to which is applied the highest dc voltage for accelerating the electrons in the beam prior to its deflection. In the 21FP4-A, the ultor function is performed by grid No.5. Since grid No.5, grid No.3, and collector are connected together within the 21FP4-A, they are collectively referred to simply as "ultor" for convenience in presenting data and curves.



21FP4-A

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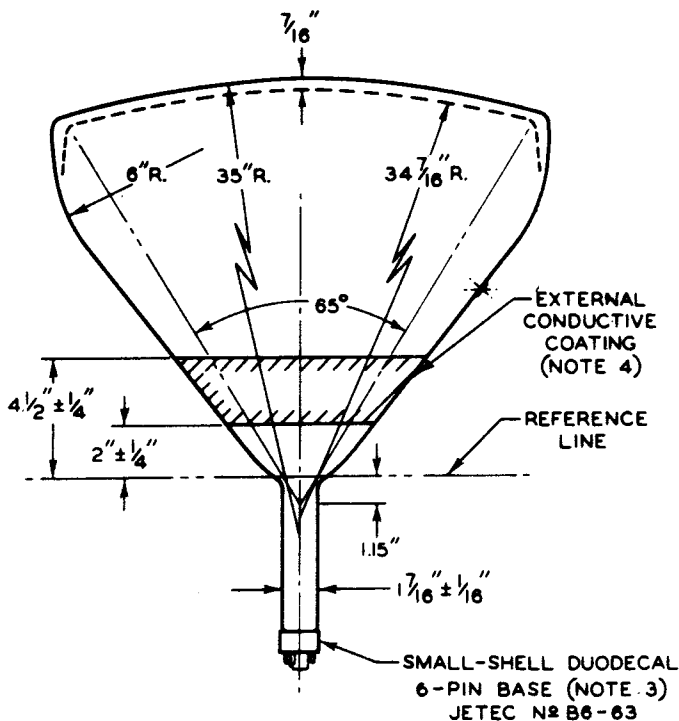
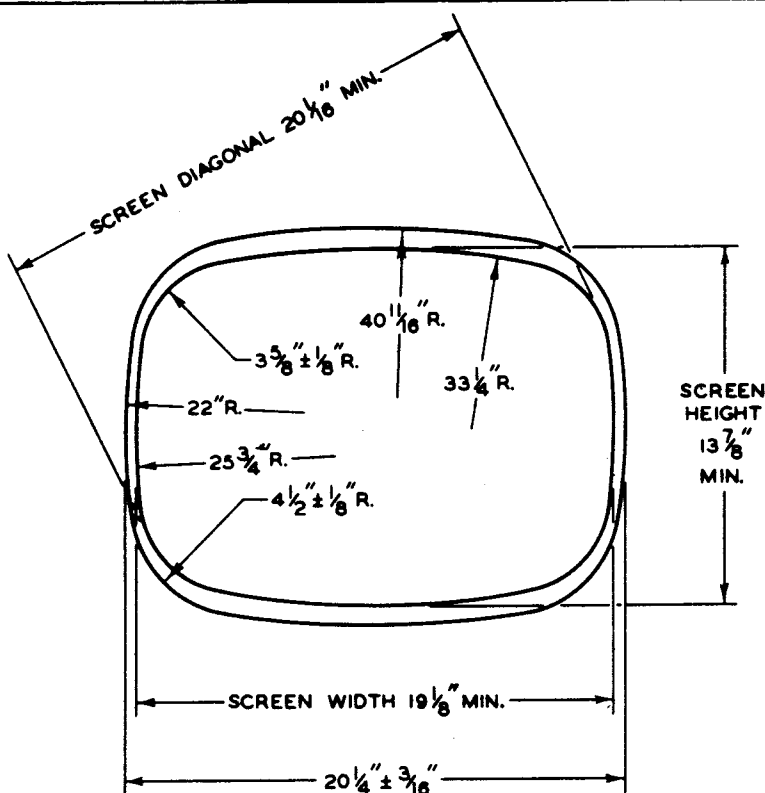
- * This value has been specified to take care of the condition where an ac voltage is provided for dynamic focusing.
- * Brilliance and definition decrease with decreasing ultor voltage. In general, the ultor voltage should not be less than 14000 volts.

*For x-ray shielding considerations, see sheet
X-RAY PRECAUTIONS FOR CATHODE-RAY TUBES
at front of this Section.*

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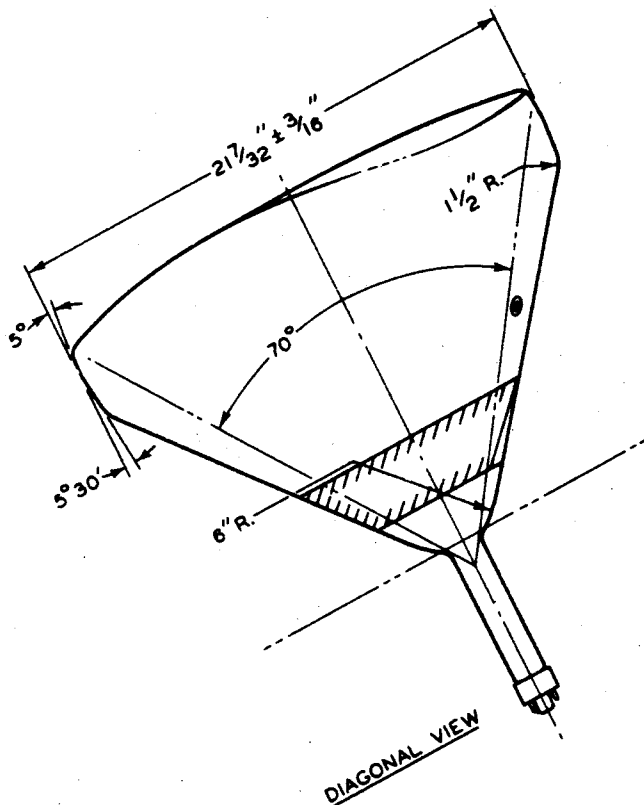
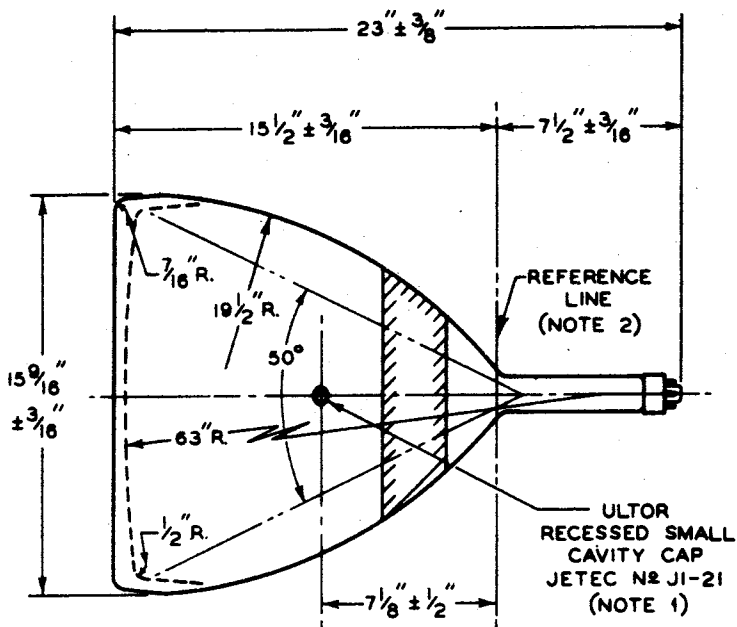
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CE-7944A



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2IFP4-A



92CL-7944

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CE-7944B

2IFP4-A



2IFP4-A

KINESCOPE

NOTE 1: THE PLANE THROUGH THE TUBE AXIS AND PIN No.6 MAY VARY FROM THE PLANE THROUGH THE TUBE AXIS AND BULB TERMINAL BY ANGULAR TOLERANCE (MEASURED ABOUT THE TUBE AXIS) OF $\pm 30^\circ$. BULB TERMINAL IS ON SAME SIDE AS PIN No.6.

NOTE 2: WITH TUBE NECK INSERTED THROUGH FLARED END OF REFERENCE-LINE GAUGE JETEC No.110 (SHOWN AT FRONT OF THIS SECTION) AND WITH TUBE SEATED IN GAUGE, THE REFERENCE LINE IS DETERMINED BY THE INTERSECTION OF THE PLANE CC' OF THE GAUGE WITH THE GLASS FUNNEL.

NOTE 3: SOCKET FOR THIS BASE SHOULD NOT BE RIGIDLY MOUNTED: IT SHOULD HAVE FLEXIBLE LEADS AND BE ALLOWED TO MOVE FREELY. BOTTOM CIRCUMFERENCE OF BASE SHELL WILL FALL WITHIN A CIRCLE CONCENTRIC WITH BULB AXIS AND HAVING A DIAMETER OF 2-3/4".

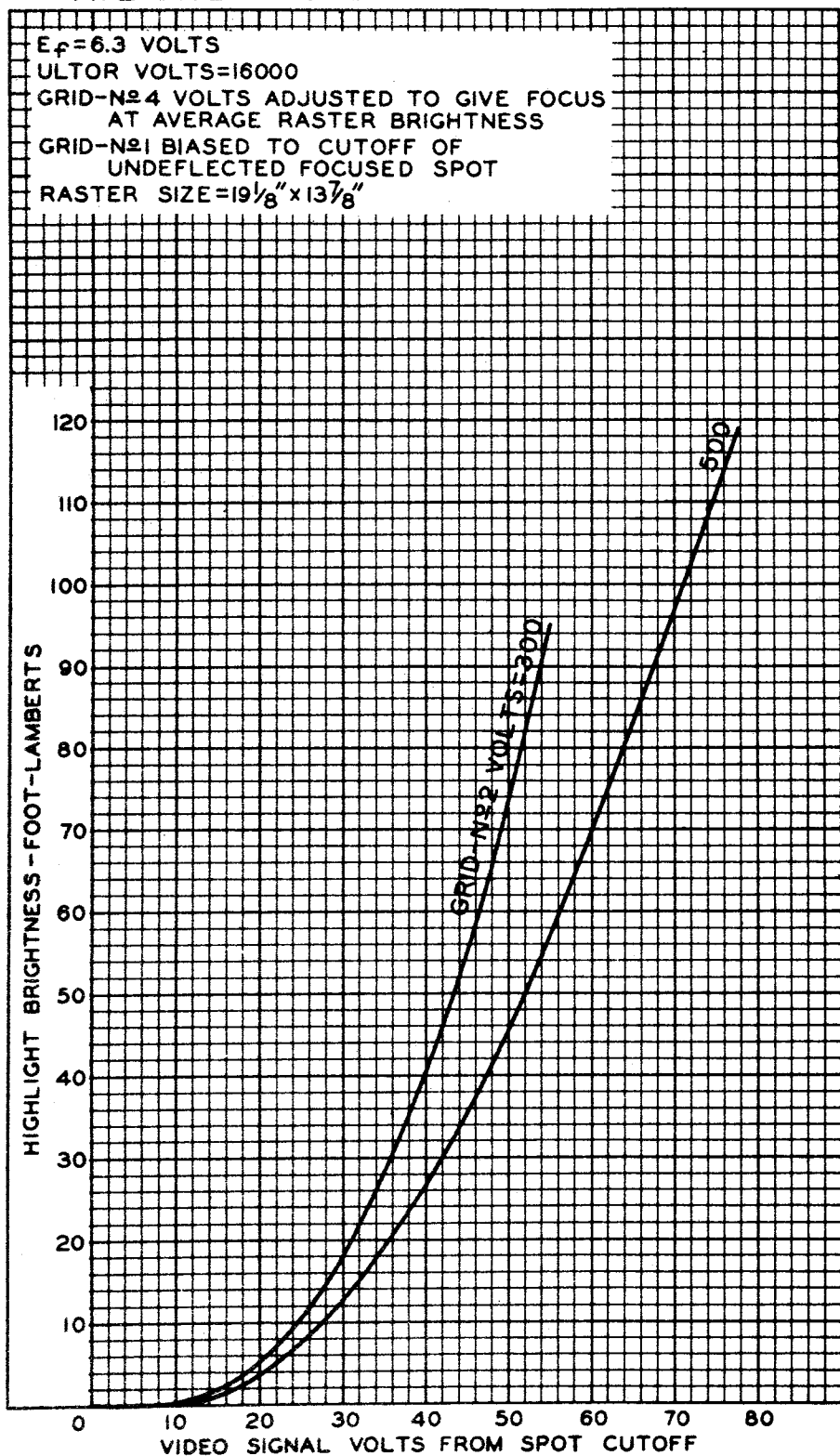
NOTE 4: EXTERNAL CONDUCTIVE COATING MUST BE GROUNDED.



2IFP4-A

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AVERAGE GRID-DRIVE CHARACTERISTICS



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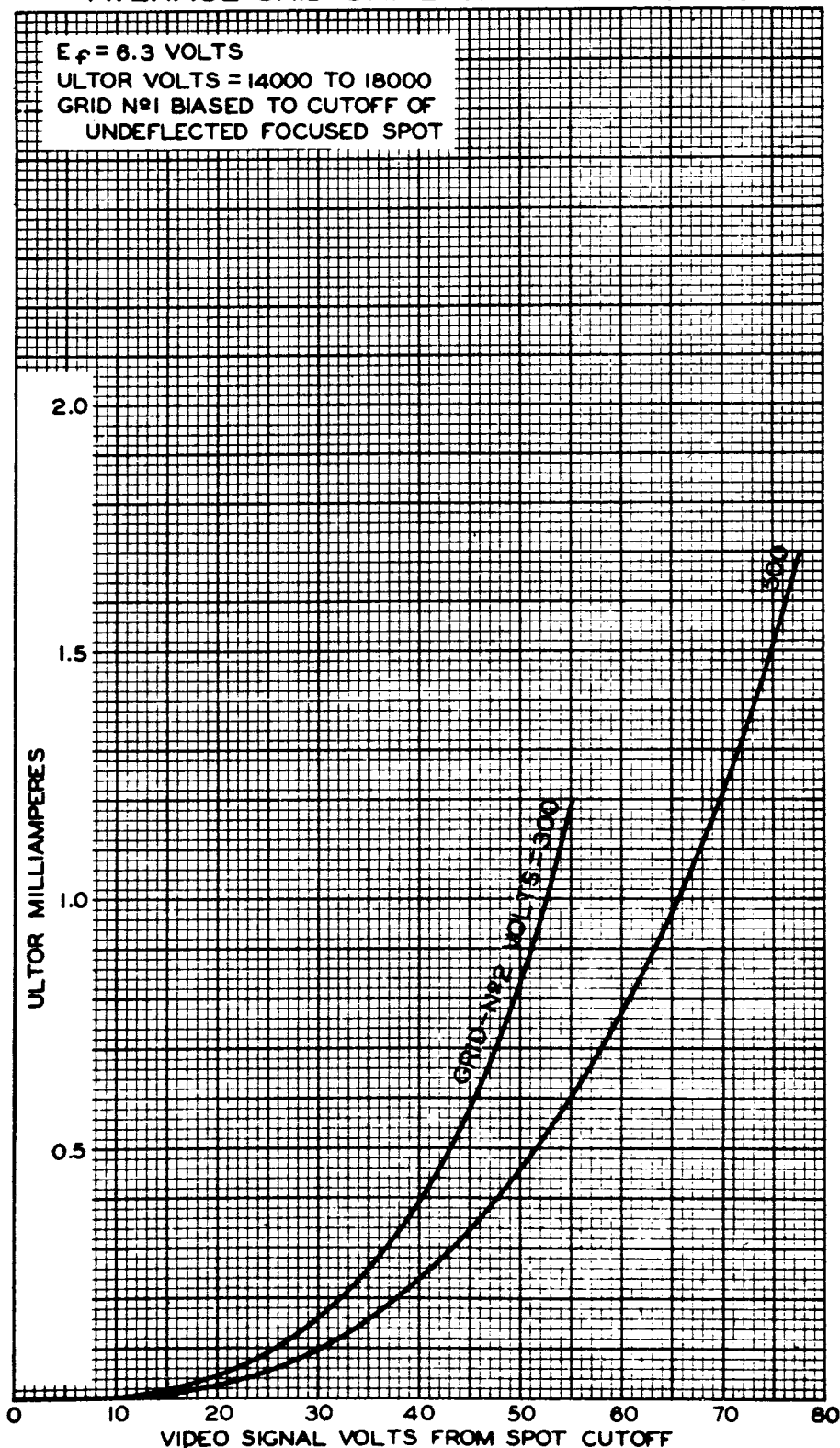
92CM-7958

2IFP4-A



2IFP4-A

AVERAGE GRID-DRIVE CHARACTERISTICS



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