



10SP4

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MONITOR KINESCOPE

METAL-BACKED SCREEN

ELECTROSTATIC FOCUS

MAGNETIC DEFLECTION

DATA

General:

Heater, for Unipotential Cathode:

Voltage 6.3 ac or dc volts

Current 0.6 amp

Direct Interelectrode Capacitances (Approx.):

Grid No.1 to All Other Electrodes 6 μ f

Cathode to All Other Electrodes 5 μ f

Faceplate, Spherical. Filterglass

Light Transmission (Approx.) 66%

Phosphor^o, Metal-Backed P4—Sulfide Type

Fluorescence and Phosphorescence White

Persistence of Phosphorescence Short

Focusing Method Electrostatic

Deflection Method Magnetic

Deflection Angle (Approx.) 50°

Overall Length 16-5/8" $\pm$ 3/8"

Greatest Diameter of Bulb 10-1/2" $\pm$ 1/8"

Minimum Useful Screen Diameter 9-1/8"

Picture Size (Within minimum-useful-screen area) 8" x 6"

Mounting Position Any

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

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

BOTTOM VIEW

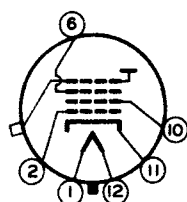
Pin 1—Heater

Pin 2—Grid No.1

Pin 6—Grid No.3

Pin 10—Grid No.2

Pin 11—Cathode



Pin 12—Heater

Cap—Ultror
(Grid No.4 &
Collector)

Maximum Ratings, Design-Center Values:

ULTOR^o VOLTAGE 14000 max. volts

GRID-No.3 VOLTAGE 2700 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

^o For curves, see front of this Section.

• In the 10SP4, grid No.4 which has the ultor function, and collector are connected together within the tube and are conveniently referred to collectively as "ultor". The "ultor" in a cathode-ray tube is the electrode, or the electrode in combination with one or more additional electrodes connected within the tube to it, to which is applied the highest dc voltage for accelerating the electrons in the beam prior to its deflection.

JULY 1, 1952

TUBE DEPARTMENT

TENTATIVE DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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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_u) between 10000* and 14000 volts
and grid-No.2 voltage (E_{c2}) between 150 and 410 volts

Grid-No.3 Voltage for Focus with

Ultor Current of 100 μ amp 11.7% to 15.9% of E_u volts

Grid-No.1 Voltage for

Visual Extinction of

8" x 6" Raster 9% to 24% of E_{c2} volts

Max. Grid-No.3 Current**

See Curves

Grid-No.2 Current

-15 to +15 μ amp

Field Strength of Adjustable

Centering Magnet 0 to 8 gaussess

Examples of Use of Design Ranges:

For ultor voltage of	12000	14000	volts
and grid-No.2 voltage of	200	200	volts

Grid-No.3 Voltage for

Focus with Ultor

Current of 100 μ amp . 1400 to 1900 1640 to 2225 volts

Grid-No.1 Voltage for

Visual Extinction of

8" x 6" Raster -18 to -48 -18 to -48 volts

Maximum Circuit Values:

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

* Brilliance and definition decrease with decreasing ultor voltage. In general, the ultor voltage should not be less than 10000 volts.

** Grid-No.3 Current increases as the ultor voltage is decreased.

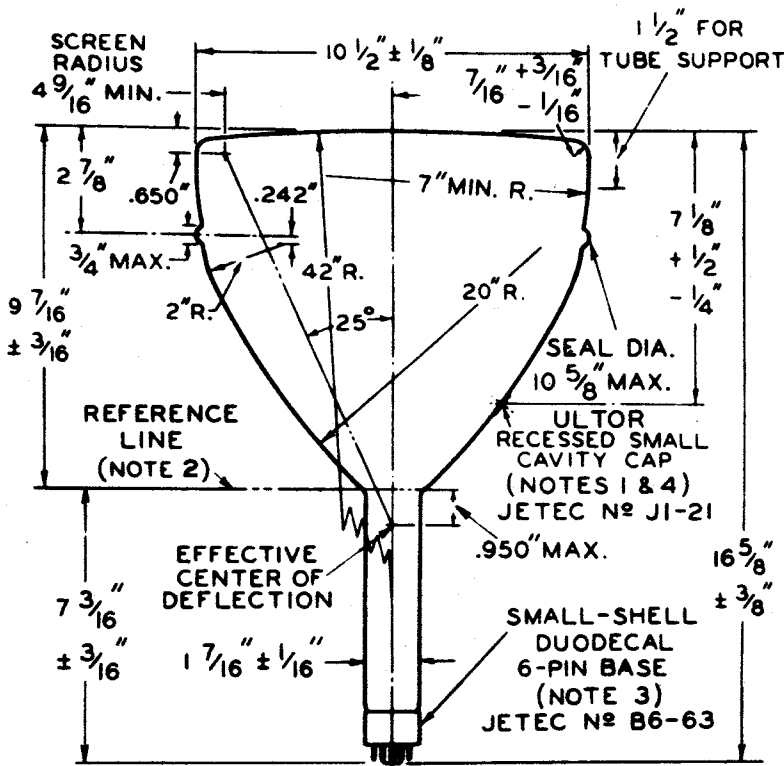
For x-ray shielding considerations, see sheet
X-RAY PRECAUTIONS FOR CATHODE-RAY TUBES
at front of this Section



IOSP4

IOSP4

MONITOR KINESCOPE



92CM-7729

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 AN ANGULAR TOLERANCE (MEASURED ABOUT THE TUBE AXIS) OF $\pm 10^\circ$. BULB TERMINAL IS ON SAME SIDE AS PIN No.6.

NOTE 2: REFERENCE LINE IS DETERMINED BY POSITION WHERE REFERENCE-LINE GAUGE (JETEC No.112) 1.500" + 0.003" - 0.000" 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. BOTTOM CIRCUMFERENCE OF BASE SHELL WILL FALL WITHIN CIRCLE CONCENTRIC WITH BULB AXIS AND HAVING DIAMETER OF 1-7/8".

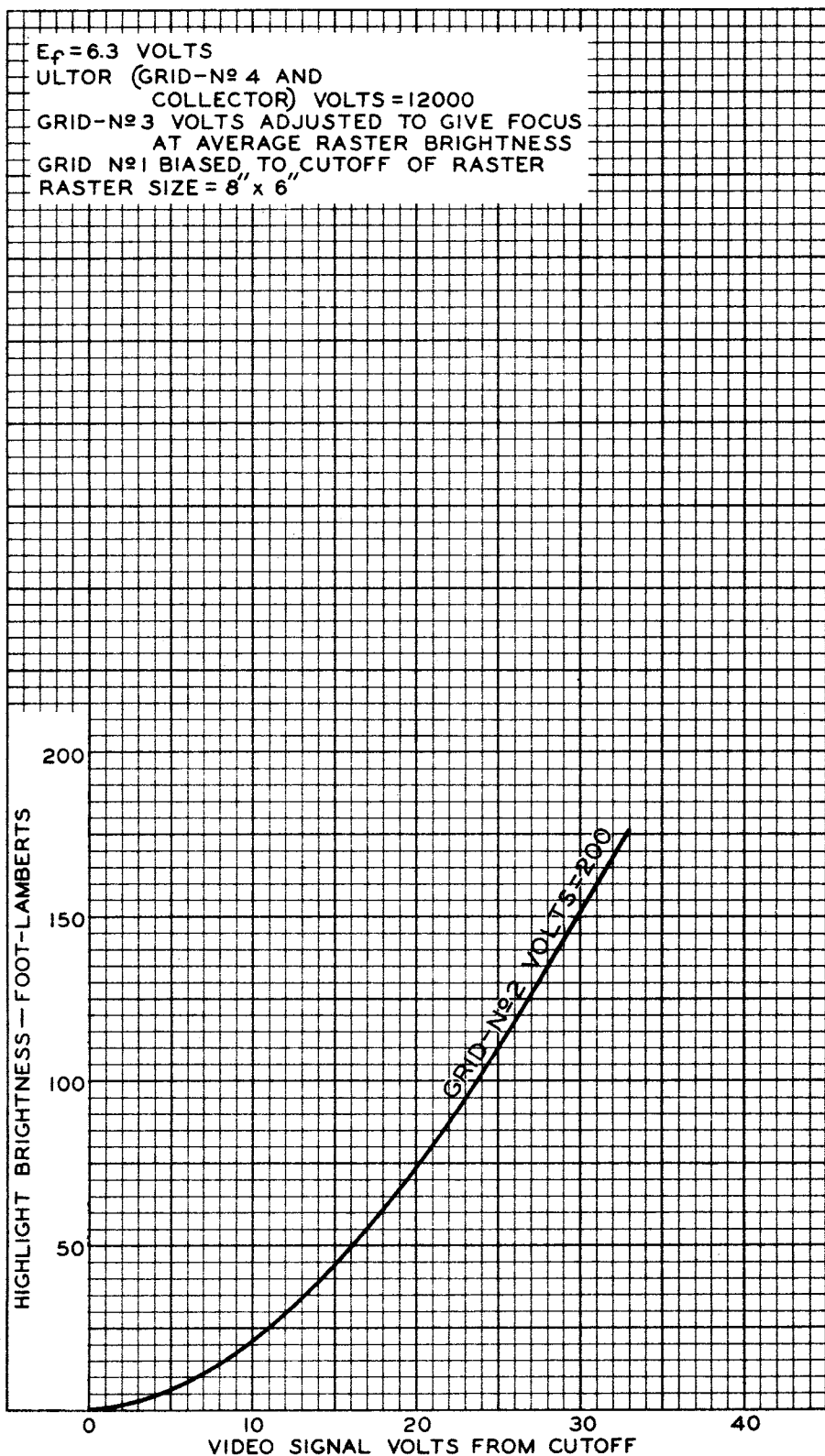
NOTE 4: TUBE SUPPORT MUST BE KEPT AT LEAST 2" AWAY FROM BULB TERMINAL.

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AVERAGE GRID-DRIVE CHARACTERISTIC



MAR. 21, 1952

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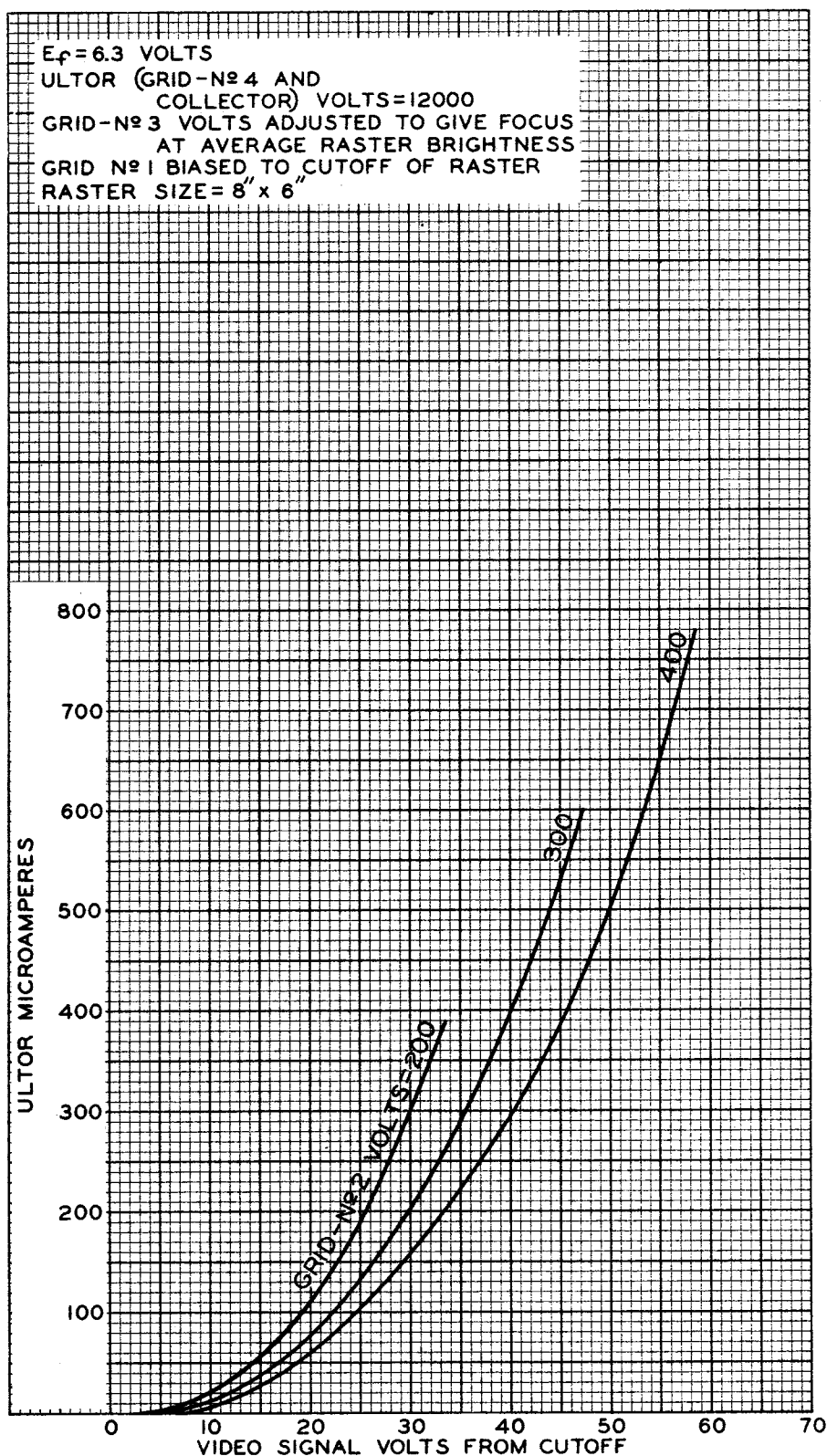
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AVERAGE GRID-DRIVE CHARACTERISTICS

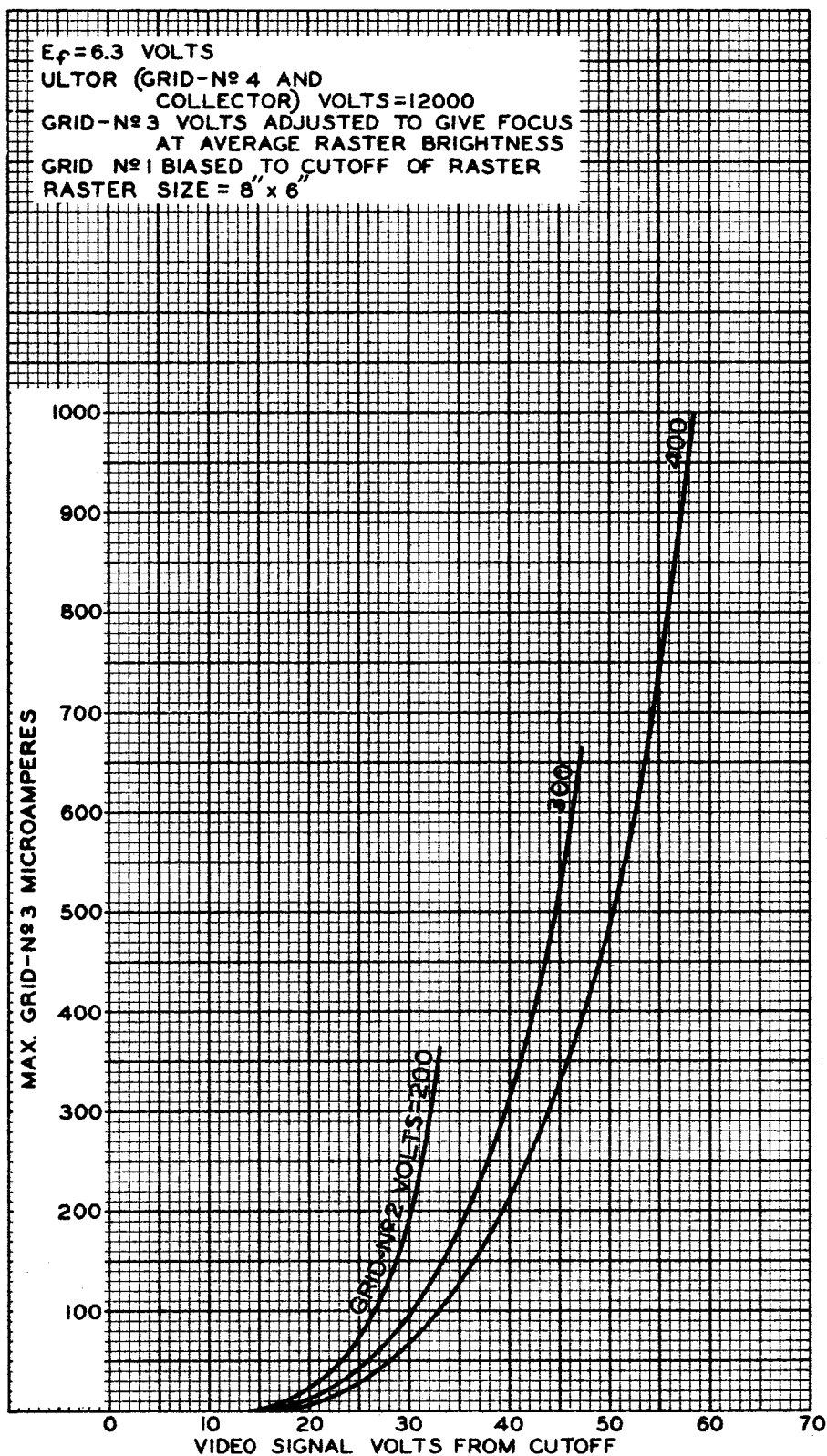


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GRID-DRIVE CHARACTERISTICS



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