



7TP4

7TP4 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 $\mu\mu\text{f}$ Cathode to All Other Electrodes 5 $\mu\mu\text{f}$

Faceplate Clear Glass

Phosphor, Metal-Backed^o P4—Sulfide Type

Fluorescence and Phosphorescence White

Persistence of Phosphorescence Short

Focusing Method Electrostatic

Deflection Method Magnetic

Deflection Angle (Approx.) 50°

Overall Length 13-1/8" $\pm$ 3/8"Greatest Diameter of Bulb 7-3/16" $\pm$ 1/8"

Minimum Useful Screen Diameter 6"

Picture Size (Within minimum-useful-screen area) 5-3/8" x 4"

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

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

BOTTOM VIEW

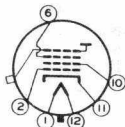
Pin 1 - Heater

Pin 2 - Grid No.1

Pin 6 - Grid No.3

Pin 10 - Grid No.2

Pin 11 - Cathode



Pin 12 - Heater

Cap - Grid No.4,
Collector
(Ultor)

Maximum Ratings, Design-Center Values:

ULTOR* VOLTAGE 12000 max. volts

GRID-No.3 VOLTAGE 2000 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 7TP4, 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.

FEB. 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 12000 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. . . 11.6% to 15.8% of E_u volts

Grid-No.1 Voltage for Visual

Extinction of Undeflected

Focused Spot. 11% to 25.7% of E_{c2} volts

Grid-No.3 Current**.

See Curves

Grid-No.2 Current.

-15 to +15 μ amp

Field Strength of Adjustable

Centering Magnet. 0 to 8 gauss

Examples of Use of Design Ranges:

For ultor voltage of 10000 volts

and grid-No.2 voltage of 200 volts

Grid-No.3 Voltage for Focus with

Ultor Current of 100 μ amp. . . 1160 to 1580 volts

Grid-No.1 Voltage for Visual

Extinction of Undeflected

Focused Spot. -22 to -52 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.



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MONITOR KINESCOPE



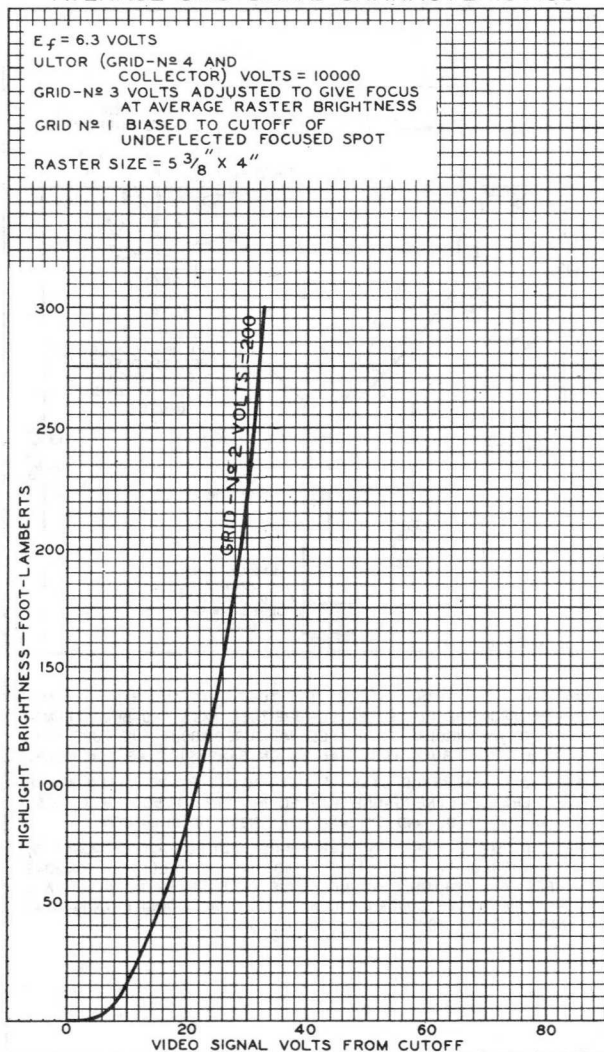
NOTE 3: SOCKET FOR THIS BASE SHOULD NOT BE RIGIDLY MOUNTED; IT SHOULD HAVE FLEXIBLE LEADS AND BE ALLOWED TO MOVE FREELY. BOTTOM CIRCUMFERENCE OF BASE SHELL WILL FALL WITHIN CIRCLE CONCENTRIC WITH BULB AXIS AND HAVING DIAMETER OF 1-7/8".

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AVERAGE GRID-DRIVE CHARACTERISTICS



OCT. 3, 1951

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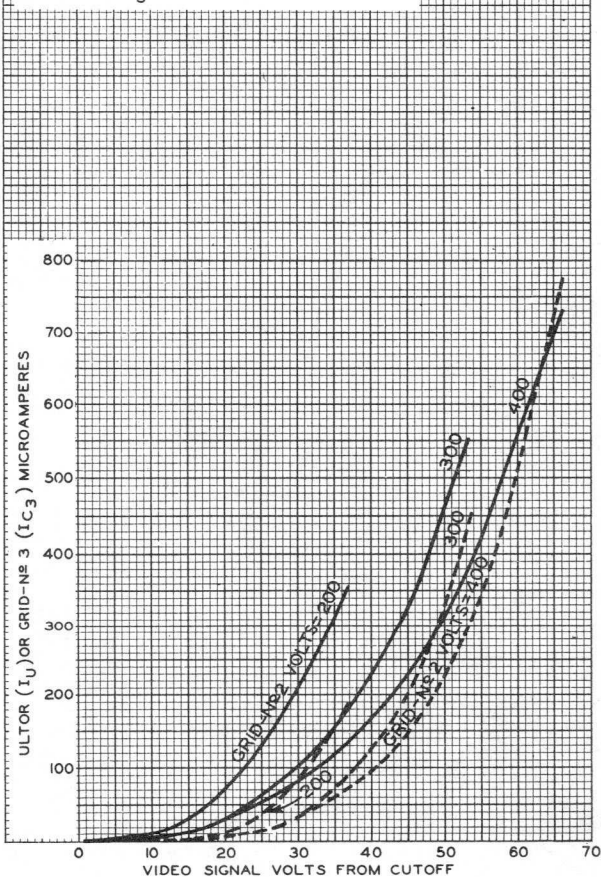
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AVERAGE GRID-DRIVE CHARACTERISTICS

 $E_f = 6.3$ VOLTSULTOR (GRID-No 4 AND
COLLECTOR) VOLTS = 10000GRID-No 3 VOLTS ADJUSTED TO GIVE FOCUS
AT AVERAGE RASTER BRIGHTNESSGRID No 1 BIASED TO CUTOFF OF
UNDEFLECTED FOCUSED SPOT— = I_U --- = I_{C_3} 

OCT. 3, 1951

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92CM-7688

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