



5AYP4

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VIEW-FINDER KINESCOPE

METAL-BACKED SCREEN

ELECTROSTATIC FOCUS

MAGNETIC DEFLECTION

DATA

General:

Heater, for Unipotential Cathode:

Voltage. 6.3 ac or dc volts

Current. $0.6 \pm 10\%$ 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, Spherical Clear Glass

Phosphor (For curves, see front of this section). P4-Sulfide Type, Metal-Backed

Fluorescence White

Phosphorescence. White

Persistence. Short

Focusing Method. Electrostatic

Deflection Method. Magnetic

Deflection Angle (Approx.) 53° Overall Length $11-9/16" \pm 3/8"$ Greatest Diameter of Bulb. $4-15/16" \pm 3/32"$ Minimum Useful Screen Diameter $4-1/4"$ Picture Size (within minimum-useful-screen area) $3-3/8" \times 2-1/2"$

Weight (Approx.) 1 lb 6 oz

Mounting Position. Any

Ultor* Terminal. Recessed Small Ball Cap (JETEC No. J1-22)

Bulb J-39-1/2

Base Long Medium-Shell Octal 8-Pin (JETEC No. B8-65)

BOTTOM VIEW

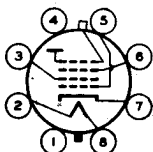
Pin 1 - No Connection

Pin 2 - Heater

Pin 3 - Grid No.2

Pin 4 - No Connection

Pin 5 - Grid No.1



Pin 6 - Grid No.3

Pin 7 - Cathode

Pin 8 - Heater

Cap - Ultor
(Grid No.4,
Collector)

Maximum Ratings, Design-Center Values:

ULTOR VOLTAGE* 10000 max. volts

GRID-No.3 VOLTAGE. 1500 max. volts

GRID-No.2 VOLTAGE. 410 max. volts

- * 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 5AYP4, the ultor function is performed by grid No.4. Since grid No.4 and collector are connected together within the 5AYP4, they are collectively referred to simply as "ultor" for convenience in presenting data and curves.

MAY 1, 1955

TUBE DIVISION

TENTATIVE DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



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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.	180 max.	volt
Heater positive with respect to cathode.	180 max.	volt

Equipment Design Ranges:

For any ultor voltage (E_{c4}) between 5000* and 10000 volts
and grid-No.2 voltage (E_{c2}) between 200 and 410 volts

Grid-No.3 Voltage for Focus
with Ultor Current of

100 μ amp	9.8% to 14.1% of E_{c4}	volts
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Grid-No.1 Voltage for Visual
Extinction of Focused

Raster	8.5% to 23.5% of E_{c2}	volts
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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	gausses
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Examples of Use of Design Ranges:

For ultor voltage of	7000	10000	volts
and grid-No.2 voltage of	200	300	volts

Grid-No.3 Voltage for
Focus with Ultor

Current of 100 μ amp. . . .	680 to 990	980 to 1410	volts
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Grid-No.1 Voltage for
Visual Extinction of

Focused Raster	-17 to -47	-25 to -71	volts
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Maximum Circuit Values:

Grid-No.1-Circuit Resistance	1.5 max.	megohms
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* Brilliance and definition decrease with decreasing ultor voltage. In general, the ultor voltage should not be less than 5000 volts.

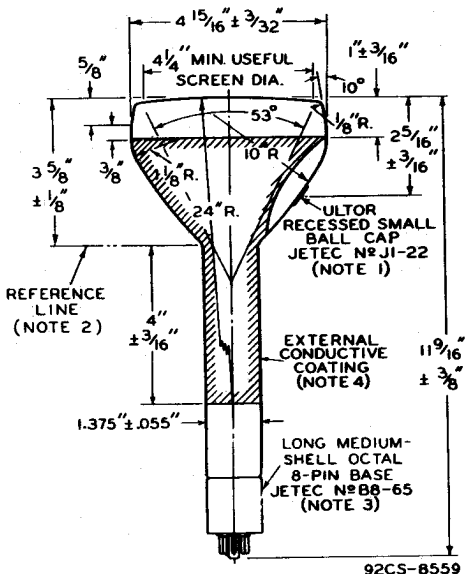
** Grid-No.3 current increases as the ultor voltage is decreased.



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NOTE 1: THE PLANE THROUGH THE TUBE AXIS AND PIN 5 MAY VARY FROM THE PLANE THROUGH THE TUBE AXIS AND ULTROR TERMINAL BY AN ANGULAR TOLERANCE (MEASURED ABOUT THE TUBE AXIS) OF $\pm 10^\circ$. ULTROR TERMINAL IS ON SAME SIDE OF TUBE AS PIN 5.

NOTE 2: REFERENCE LINE IS DETERMINED BY POSITION WHERE GAUGE 1.430 ± 0.003 I.D. AND 2" LONG WILL REST ON BULB CONE.

NOTE 3: CENTER LINE OF BULB WILL NOT DEVIATE MORE THAN 2° IN ANY DIRECTION FROM THE PERPENDICULAR ERECTED AT THE CENTER OF THE BOTTOM OF THE BASE.

NOTE 4: EXTERNAL CONDUCTIVE COATING MUST BE GROUNDED.

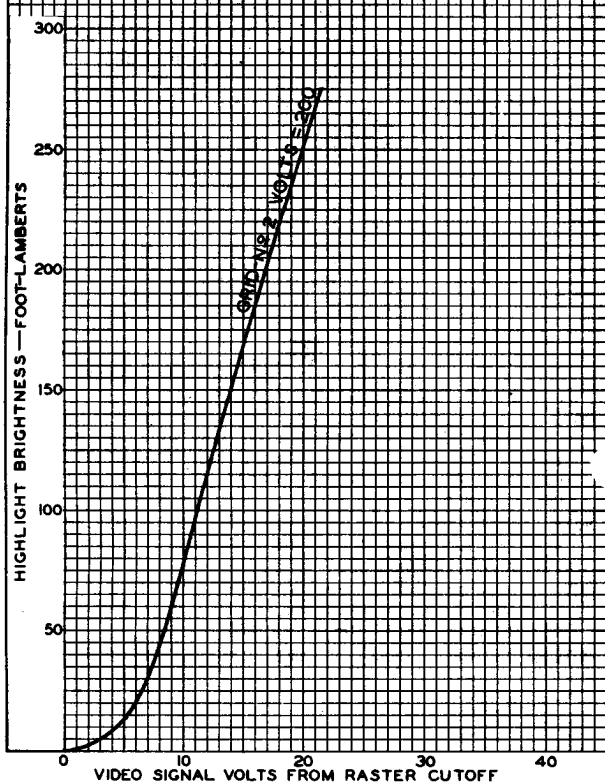
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AVERAGE GRID-DRIVE CHARACTERISTIC

$E_f = 6.3$ VOLTS
 ULTOR (GRID N^o 4 AND
 COLLECTOR) VOLTS = 10000
 GRID - N^o 3 VOLTS ADJUSTED TO GIVE FOCUS
 AT AVERAGE RASTER BRIGHTNESS
 GRID N^o 1 BIASED TO CUTOFF OF FOCUSED
 RASTER
 RASTER SIZE $\approx 3 \frac{3}{8} \times 2 \frac{1}{2}$ "



FEB. 24, 1955

TUBE DIVISION

92CM-8542

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY