



17QP4-A

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KINESCOPE

RECTANGULAR GLASS TYPE
MAGNETIC FOCUSALUMINIZED SCREEN
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. $\begin{cases} 1500 \text{ max.} \\ 750 \text{ min.} \end{cases}$ μf

Faceplate, Cylindrical Filterglass

Light transmission (Approx.) 72%

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

Fluorescence White

Phosphorescence. White

Persistence. Short

Focusing Method. Magnetic

Deflection Method. Magnetic

Deflection Angles (Approx.):

Diagonal 70° Horizontal 65° Vertical 50°

Ion-Trap Gun Requires External Single-Field Magnet

Tube Dimensions:

Overall length $19\text{--}3/16" \pm 3/8"$ Greatest width $15\text{--}25/64" \pm 1/8"$ Greatest height. $12\text{--}9/32" \pm 1/8"$ Diagonal $16\text{--}5/8" \pm 1/8"$ Neck length $7\text{--}1/2" \pm 3/16"$

Screen Dimensions (Minimum):

Greatest width $14\text{--}1/4"$ Greatest height. $10\text{--}3/4"$ Diagonal $15\text{--}5/16"$

Projected area 140 sq. in.

Weight (Approx.) 19 lbs

Mounting Position. Any

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

Bulb J-133

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

Basing Designation for BOTTOM VIEW 12N

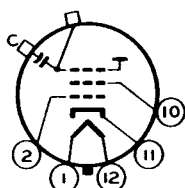
Pin 1 — Heater

Pin 2 — Grid No.1

Pin 10 — Grid No.2

Pin 11 — Cathode

Pin 12 — Heater



Cap — Ultor

(Grid No.3,
Collector)C — External
Conductive
Coating



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Maximum Ratings, Design-Center Values:

ULTOR VOLTAGE.	18000 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	150 max.	volts
Heater positive with respect to cathode.	150 max.	volts

Equipment Design Ranges:

With any ultor voltage (E_{c3}) between 14000* and 18000 volts
and grid-No.2 voltage (E_{c2}) between 150 and 500 volts

Grid-No.1 Voltage for		
Visual Extinction of		
Focused Raster.	-9.3% to -24% of E_{c2}	volts
Grid-No.1 Video Drive		
from Raster Cutoff		
(Black Level):		
White-level value		
(Peak positive)	9.3% to 24% of E_{c2}	volts
Grid-No.2 Current	-15 to +15	μ amp
Focusing-Coil Current (DC) ^o	$\left[\sqrt{\frac{E_{c3}}{16000}} \times 111 \right] \pm 10\%$	ma
Ion-Trap Magnet Current		
(Average)**	$\sqrt{\frac{E_{c3}}{16000}} \times 30$	ma
Minimum Field Strength of		
PM Ion-Trap Magnet§	$\sqrt{\frac{E_{c3}}{16000}} \times 33$	gausses
Field Strength of Adjustable		
Centering Magnet.	0 to 8	gausses

Examples of Use of Design Ranges:

With ultor voltage of		
and grid-No.2 voltage of		
	14000	volts
	300	volts
Grid-No.1 Voltage for		
Visual Extinction of		
Focused Raster.	-28 to -72	volts
Grid-No.1 Video Drive		
from Raster Cutoff		
(Black Level):		
White-level value		
(Peak positive)	28 to 72	volts
Focusing-Coil Current (DC).	104 $\pm$ 10%	ma
Minimum Field Strength of		
PM Ion-Trap Magnet.	31	gausses

*,^o, **, §: See next page.



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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 14000 volts.
- O For specimen focusing coil similar to JETEC Focusing Coil No.109 positioned with air gap toward kinescope screen and center line of air gap 3 inches from Reference Line (*See Dimensional Outline*). The indicated current is for condition with sharp focus at center of picture area and combined grid-No.1 voltage and video-signal voltage adjusted to produce a highlight brightness of 30 foot-lamberts measured on an Indian Head Test Pattern set for a 14-1/4" x 10-3/4" picture size.
- ** For JETEC Ion-Trap Magnet No.117, or equivalent, located with the trailing edge of the pole pieces located over the gap between grid No.1 and grid No.2 and rotated to give maximum brightness.
- § For specimen PM ion-trap magnet, such as Heppner Model No. E437, or equivalent, located in optimum position and rotated to give maximum brightness. For a given equipment application, the tolerance range for the strength of the PM ion-trap magnet should be added to the minimum value. The maximum strength of this magnet should not exceed the specified minimum value by more than 6 gauss. This procedure will insure use of a PM ion-trap magnet allowing adequate adjustment to permit satisfactory performance without loss of highlight brightness.

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

DIMENSIONAL OUTLINE

for Type 17QP4-A is the same as that shown for Type 17LP4-A, except that the 17QP4-A has a Small-Shell Duodecal 5-Pin Base

HIGHLIGHT BRIGHTNESS vs DRIVE CURVES

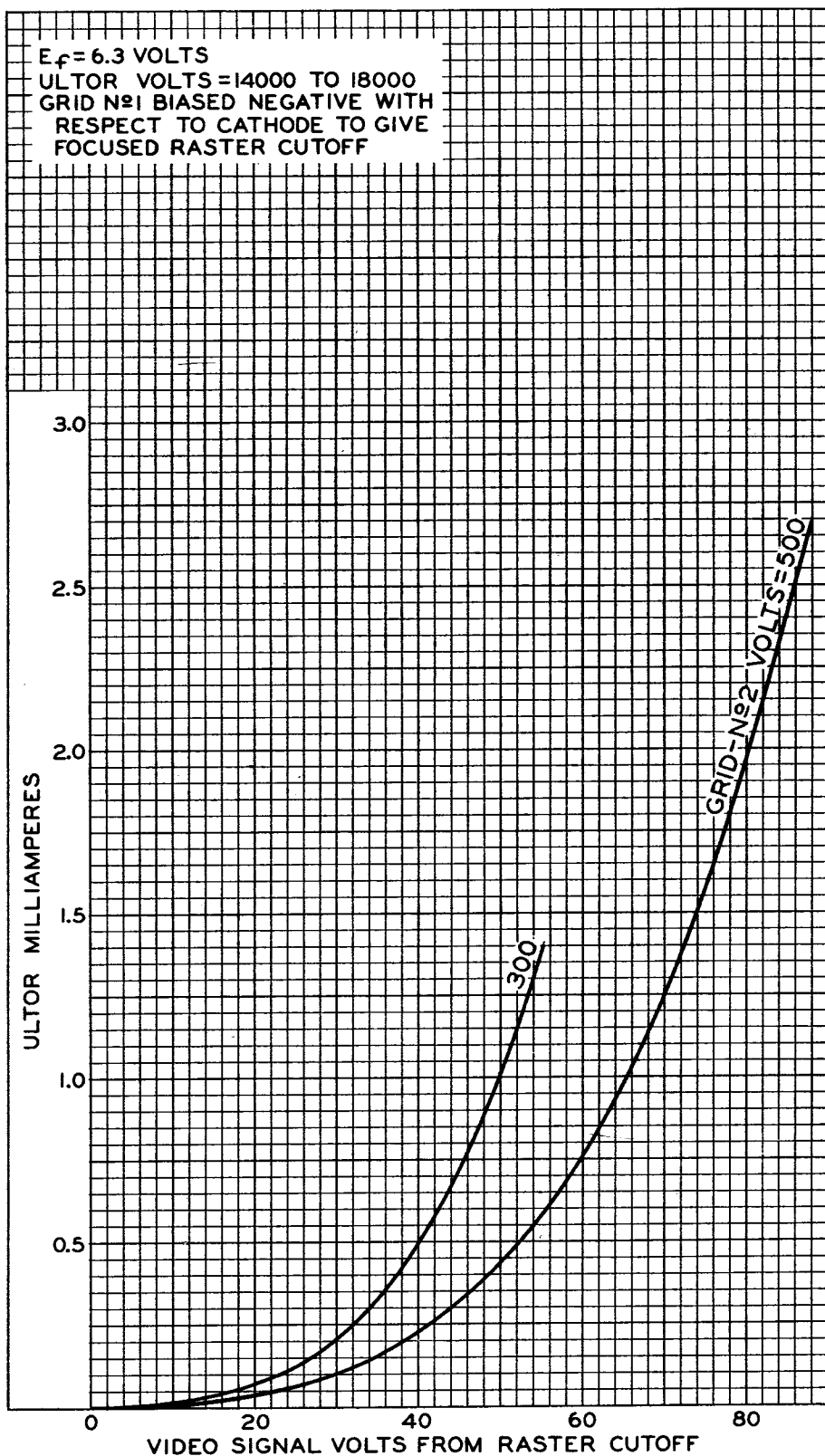
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AVERAGE GRID-DRIVE CHARACTERISTICS



TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-8869