



14HP4

14HP4

KINESCOPE

RECTANGULAR GLASS TYPE

LOW-VOLTAGE FOCUS

MAGNETIC DEFLECTION

DATA

General:

Heater, for Unipotential Cathode:

Voltage. 6.3 ac or dc volts

Current. $0.6 \pm 10\%$ 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. $\begin{cases} 2000 \text{ max.} & \mu\text{f} \\ 750 \text{ min.} & \mu\text{f} \end{cases}$

Faceplate, Spherical Filterglass

Light Transmission (Approx.) 75%

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

Fluorescence White

Phosphorescence. White

Persistence. 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 $16-25\frac{32}{32}'' \pm \frac{3}{8}''$ Greatest width $12-17\frac{32}{32}'' \pm \frac{1}{8}''$ Greatest height. $9-23\frac{32}{32}'' \pm \frac{1}{8}''$ Diagonal $13-11\frac{16}{16}'' \pm \frac{1}{8}''$

Screen Dimensions (Minimum):

Greatest width $11-1\frac{8}{8}''$ Greatest height. $8-5\frac{16}{16}''$ Diagonal $12-1\frac{4}{4}''$

Weight (Approx.) 10 lbs

Mounting Position. Any

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

Bulb J109-1/2

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

BOTTOM VIEW

Pin 1—Heater

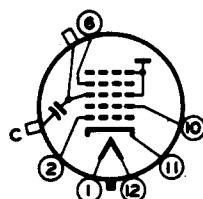
Pin 2—Grid No.1

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

•: See next page.

NOV. 5, 1954

TUBE DIVISION

TENTATIVE DATA 1

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



14HP4

KINESCOPE

Maximum Ratings, Design-Center Values:

ULTOR [•] VOLTAGE	14000 max.	volts
GRID-No.4 VOLTAGE:		
Positive value	500 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 12000 and 14000 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 Focused Raster	-9.3% to -24% of E_{c2}	volts
Grid-No.4 Current	-25 to +25	μ amp
Grid-No.2 Current	-15 to +15	μ amp
Field Strength of Single-Field Ion-Trap Magnet (Approx.).	$\sqrt{\frac{E_{c5}}{12000}} \times 32$	gausses
Field Strength of Adjustable Centering Magnet	0 to 8	gausses

Examples of Use of Design Ranges:

<i>For ultor voltage of</i>	12000	14000	volts
<i>and grid-No.2 voltage of</i>	300	300	volts
Grid-No.4 Voltage for Focus with Ultor Current of 100 μ amp	-50 to +265	-55 to +310	volts
Grid-No.1 Voltage for Visual Extinction of Focused Raster	-28 to -72	-28 to -72	volts
Field Strength of Ion-Trap Magnet	32	35	gausses

Maximum Circuit Values:

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

[•],*: see next page.