



7QP4

7QP4

MONITOR KINESCOPE

MAGNETIC 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 μf Cathode to All Other Electrodes. 5 μf

Phosphor (For Curves, See front of this Section). No.4-Sulfide Type

Fluorescence White

Phosphorescence. White

Persistence. Short

Focusing Method. Magnetic

Deflection Method. Magnetic

Deflection Angle (Approx.) 52°

Ion-Trap Gun Requires External, Single-Field Magnet

Overall Length $12-7/8" \pm 3/8"$ Greatest Diameter of Bulb. $7-3/16" \pm 1/8"$ Screen Diameter. $6-1/4"$

Mounting Position. Any

Cap. Recessed Small Cavity

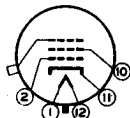
Base Small-Shell Duodecal 5-Pin

BOTTOM VIEW

Pin 1-Heater

Pin 2-Grid No.1

Pin 10-Grid No.2



Pin 11-Cathode

Pin 12-Heater

Cap - Anode

Maximum Ratings, Design-Center Values:

ANODE VOLTAGE* 10000 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

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

Typical Operation:

Anode Voltage**. 8000 . . volts

* The product of anode voltage and average anode current should be limited to 6 watts.

** Brilliance and definition decrease with decreasing anode voltage. In general, the anode voltage should not be less than 6000 volts.

JAN. 1, 1951

TUBE DEPARTMENT

TENTATIVE DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

7QP4



7QP4

MONITOR KINESCOPE

Grid-No.2 Voltage.	300	volts
Grid-No.1 Voltage for Visual Extinction of Undelected Focused Spot . .	-33 to -77	volts
Focusing-Coil Current (DC, approx.)# . . .	80	ma
Field Strength of Single-Field Ion-Trap Magnet ^o	35	gausses

Maximum Circuit Values:

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

Minimum Circuit Values:

The power supply should be of the limited-energy type with inherent regulation to limit the continuous short-circuit current to 5 milliamperes. If the supply permits the instantaneous short-circuit current to exceed 1 ampere, or is capable of storing more than 250 microcoulombs, the effective resistance in circuit between indicated electrode and the output capacitor should be as follows:

Grid-No.1-Circuit Resistance	150 min.	ohms
Grid-No.2-Circuit Resistance	470 min.	ohms
Anode-Circuit Resistance	11000 min.	ohms

The resistors used should be capable of withstanding the applied voltage.

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 *Outline Drawing*). The indicated current is for condition with combined grid-No.1 bias voltage and video-signal voltage adjusted to produce a highlight brightness of 40 foot-lamberts on a 5-3/8" x 4" picture area sharply focused at center of screen.

^o Measured at center of field with General Electric Gauss Meter, Cat. No.409X51.



7QPA

Technical drawing of a vacuum tube assembly, showing dimensions and labels:

- Overall width: $7\frac{3}{16} \pm \frac{1}{8}$ "
- SCREEN DIA. $6\frac{1}{4}$ "
- MIN. VALUE 6"
- 1" FOR TUBE SUPPORT
- $2\frac{7}{32}$ "
- $3\frac{3}{8}$ " R.
- 26°
- $3\frac{1}{2}$ "
- $4\frac{3}{16}$ "
- $\pm \frac{1}{4}$ "
- SEAL DIA. $7\frac{5}{16}$ " MAX.
- $12\frac{3}{8}$ "
- $\pm \frac{3}{8}$ "
- ANODE RECESSED SMALL CAVITY CAP (NOTE 1)
- .950" MAX.
- $17\frac{1}{16} \pm \frac{1}{16}$ "
- SMALL-SHELL DUODECAL 5-PIN BASE (NOTE 3)
- 15 R.
- 24 R.
- $7\frac{7}{8}$ R.
- $3\frac{1}{4}$ " MAX.
- 1" (NOTE 7)
- REFERENCE LINE (NOTE 2)
- $5\frac{1}{16}$ "
- $4\frac{5}{8}$ " (NOTE 4)
- $3\frac{11}{16}$ " MIN. (NOTE 5)
- SEE NOTE 6
- $12\frac{7}{8}$ "
- $\pm \frac{3}{8}$ "

92CM-7524

NOTE 1: THE PLANE THROUGH THE TUBE AXIS AND VACANT PIN POSITION No.3 MAY VARY FROM THE PLANE THROUGH THE TUBE AXIS AND ANODE TERMINAL BY AN ANGULAR TOLERANCE (MEASURED ABOUT THE TUBE AXIS) OF 10° . ANODE TERMINAL IS ON SAME SIDE AS VACANT PIN POSITION No.3.

NOTE 2: REFERENCE LINE IS DETERMINED BY POSITION WHERE
HINGED GAUGE 1.500" + .003" - .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: DISTANCE FROM REFERENCE LINE FOR LOCATING CENTER OF ION-TRAP MAGNETIC FIELD. DIRECTION OF FIELD OF THE ION-TRAP MAGNET SHOULD BE SUCH THAT NORTH POLE IS ADJACENT TO VACANT PIN POSITION No.8 AND SOUTH POLE TO PIN No.2.

7QP4



7QP4

MONITOR KINESCOPE

NOTE 5: LOCATION OF DEFLECTING YOKE MUST BE WITHIN THIS SPACE.

NOTE 6: KEEP THIS SPACE CLEAR FOR SINGLE-FIELD, ION-TRAP MAGNET.

NOTE 7: FOR TUBE SUPPORT WHICH MUST BE KEPT AT LEAST 2" AWAY FROM ANODE CAVITY CAP.

JAN. 1, 1951

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

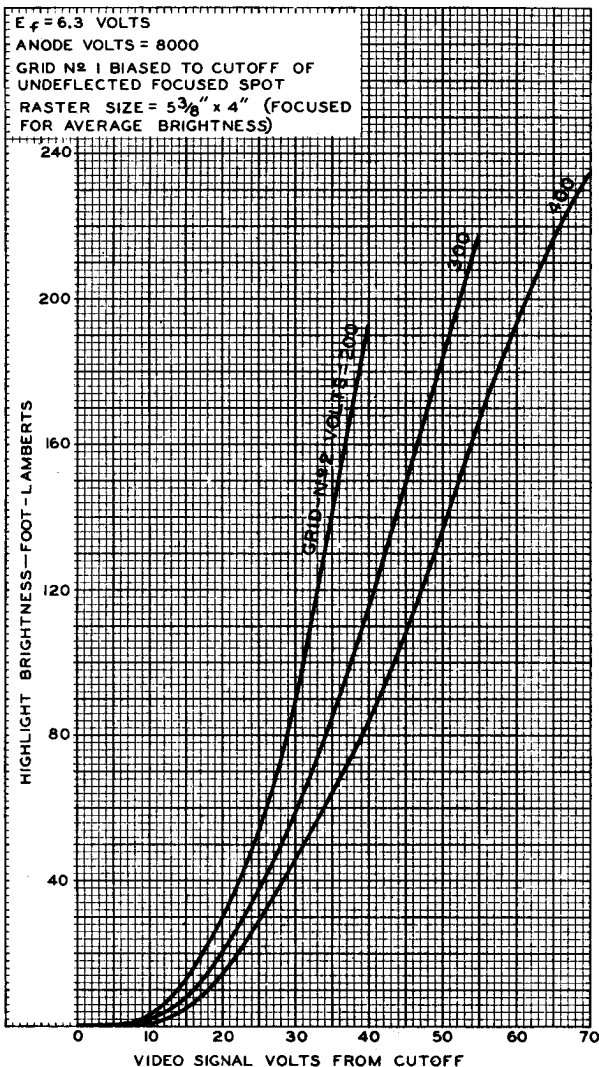
CE-7524B



7QP4

7QP4

AVERAGE GRID-DRIVE CHARACTERISTICS

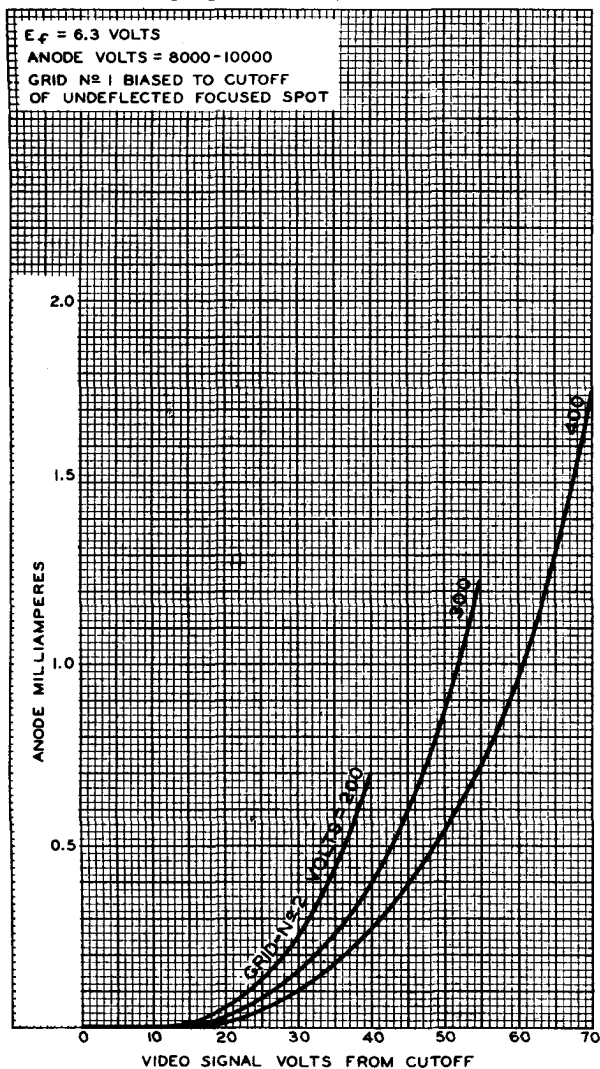


7QP4



7QP4

AVERAGE GRID-DRIVE CHARACTERISTICS



AUGUST 22, 1950

TUBE DEPARTMENT

92CM-7530

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY