



7DP4

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KINESCOPE

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 μf ←Cathode to All Other Electrodes. 5 μf External Conductive Coating to Anode No.2 { 1500 max. μf
400 min. μf

Phosphor (For Curves, see front of this Section) No.4

Fluorescence and Phosphorescence White

Persistence of Phosphorescence Medium

Focusing Method. Electrostatic

Deflection Method. Magnetic

Deflection Angle (Approx.) 50°

Ion Trap Magnetic

External Coating Conductive

Overall Length $14\text{--}1/16" \pm 3/8"$ Greatest Diameter of Bulb. $7\text{--}3/16" \pm 1/8"$

Minimum Useful Screen Diameter 6"

Raster Size (Approx.) 4" x $5\text{--}1/2"$

Mounting Position. Any

Cap. Recessed Small Cavity

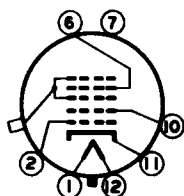
Base Small-Shell Duodecal 7-Pin

BOTTOM VIEW

Pin 1-Heater

Pin 2-Grid No.1

Pin 6-Anode No.1

Pin 7-Internal Con.-
Do Not Use

Pin 10-Grid No.2

Pin 11-Cathode

Pin 12-Heater

Cap - Anode No.2,
Grid No.3

Maximum Ratings, Design-Center Values:

ANODE-No.2[■] VOLTAGE[●] 8000 max. volts

ANODE-No.1 VOLTAGE 2400 max. volts

GRID-No.2 VOLTAGE. 410 max. volts

GRID-No.1 (CONTROL ELECTRODE) 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 ←

■, ●: See next page.

← Indicates a change.

NOV. 15, 1949

TUBE DEPARTMENT

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

DATA



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Typical Operation:

Anode-No.2 Voltage*	6000	volts
Anode-No.1 Voltage for Focus ⁰	1215 to 1645	volts
Grid-No.2 Voltage	250	volts
Grid-No.1 Voltage for Visual Cutoff**	-27 to -63	volts
Max. Anode-No.1 Current Range	-15 to +10	μamp

Maximum Circuit Values:

Grid-No.1-Circuit Resistance	1.5 max.	megohms
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→ 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 ma. 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-No.1-Circuit Resistance	2700 min.	ohms
Anode-No.2-Circuit Resistance	9100 min.	ohms

The resistors used should be capable of withstanding the voltages involved.

Components:

Ion-Trap Magnet*	RCA Type No.203D1
→ Deflecting Yoke*	RCA Type No.201D12

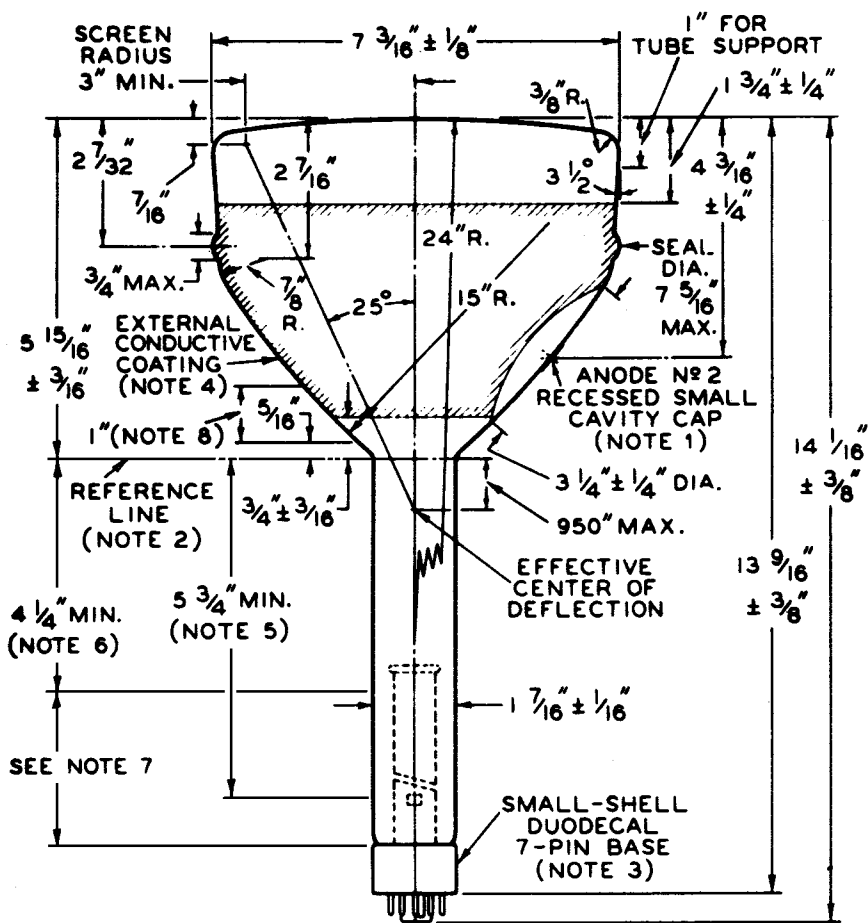
- Anode No.2 and grid No.3, which are connected together within tube, are referred to herein as anode No.2.
- The product of anode-No.2 voltage and average anode-No.2 current should never exceed 6 watts.
- * Brilliance and definition decrease with decreasing anode-No.2 voltage. In general, anode-No.2 voltage should not be less than 5000 volts.
- With the combined grid-No.1 bias voltage and video-signal voltage adjusted to produce a highlight brightness of 12 foot-lamberts on a 4" x 5-1/2" picture area.
- ** Visual extinction of undeflected focused spot.
- # The dc current required by this magnet is approx. 70 ma. for the typical operating conditions shown.
- * The horizontal deflecting-coil current required by this yoke to produce 5-1/2" picture width is approx. 410 ma. peak-to-peak under the typical operating conditions shown. The current varies directly as the square root of the anode-No.2 voltage.

→ Indicates a change.



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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 No. 2 TERMINAL BY AN ANGULAR TOLERANCE (MEASURED ABOUT THE TUBE AXIS) OF 10°. ANODE No. 2 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: EXTERNAL CONDUCTIVE COATING MUST BE GROUNDED.

NOTE 5: DISTANCE TO INTERNAL POLE PIECES. PLANE THROUGH

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(continued from preceding page)

PIN No.6 AND TUBE AXIS PASSES THROUGH LINE JOINING CENTERS OF POLE PIECES. DIRECTION OF PRINCIPAL FIELD OF ION-TRAP MAGNET SHOULD BE SUCH THAT NORTH POLE IS ADJACENT TO PIN No.6 AND SOUTH POLE TO PIN No.12.

NOTE 6: LOCATION OF DEFLECTING YOKE MUST BE WITHIN THIS SPACE.

NOTE 7: KEEP THIS SPACE CLEAR FOR ION-TRAP MAGNET.

NOTE 8: FOR TUBE SUPPORT WHICH MUST NOT COVER SPECIFIED CLEAR AREA AROUND ANODE CAP.

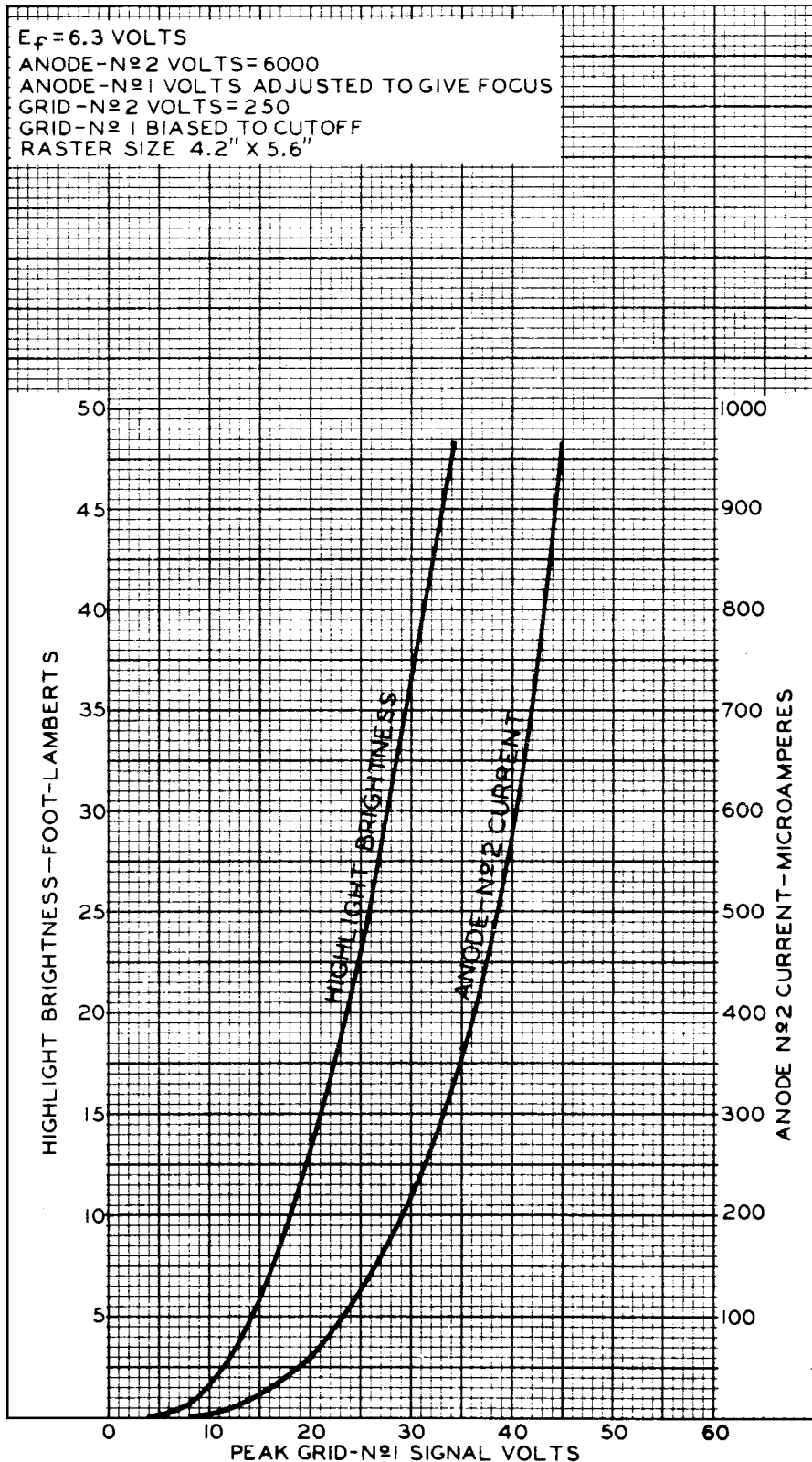
92CM-6664R1



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AVERAGE CHARACTERISTICS



OCT. 14, 1947

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