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 ........ 6.5 .... μf
Cathode to All Other Electrodes ............. 5.0 .... μf
External Conductive Coating to Anode No.2 2500 max. .... μf
1500 min. .... μf

Phosphor (For Curves, see front of this Section) .... No.4
Fluorescence and Phosphorescence ......... White
Persistence of Phosphorescence ............ Medium

Focusing Method .................... Magnetic
Deflection Method .................... Magnetic
Deflection Angle (Approx.) ................... 50°
Ion Trap .................... Magnetic
External Coating .................... Conductive
Overall Length ................. 17-5/8" ± 3/8"
Greatest Diameter of Bulb .......... 10-1/2" ± 1/8"
Minimum Useful Screen Diameter .... .... 9"
Raster Size (Approx.) .............. 6" x 8"
Mounting Position .................... Any
Cap ................................ Recessed Small Cavity
Base ................................ Small-Shell Duodecal 7-Pin

Pin 1—Heater
Pin 2—Grid No.1
Pin 6—No Connection
Pin 7—No Connection
Pin 10—Grid No.2
Pin 11—Cathode
Pin 12—Heater
Cap — Anode, Grid No.3

Bottom View

Maximum Ratings, Design—Center Values:

ANODE VOLTAGE* .................. 10000 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 ........ 125 max. volts
Heater positive with respect to cathode .... 125 max. volts

* See next page.
← Indicates a change.
Typical Operation:
Anode Voltage* .................................. 9000 .. volts
Grid-No.2 Voltage, ................................ 250 .. volts
Grid-No.1 Voltage* ................................ -27 to -63 volts

Maximum Circuit Values:
Grid-No.1-Circuit Resistance ............. 1.5 max. megohms

Minimum Circuit Values:
When the output capacitor of the power supply is capable of storing more than 250 microcoulombs, and when the inherent regulation of the power supply permits the instantaneous short-circuit current to exceed 1 ampere, 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 voltages involved.

Components:
Ion-Trap Magnet# ......................... RCA Type No.203D1
Deflection Yoke* ................................ RCA Type No.201D1
Focusing Coil** ............................... RCA Type No.202D1

* The anode and grid No.3 which are connected together within tube are referred to herein as anode.
# Brilliance and definition decrease with decreasing anode voltage. In general, the anode voltage should not be less than 8000 volts.
** Visual extinction of undeflected focused spot.

The dc current required by this magnet is approx. 109 ma. for the typical operating conditions shown.

The vertical deflecting-coil current required by this yoke to produce 8" picture width is approx. 470 ma. peak-to-peak under the typical operating conditions shown. The current varies directly as the square root of the anode voltage.

The dc current required by this coil is approx. 115 ma. for the typical operating conditions shown and using combined grid-No.1 bias voltage and video-signal voltage adjusted to produce a highlight brightness of 20 foot-lamberts on a 6" x 8" picture area. Distance from reference line (see Outline Drawing) to center line of air gap is approx. 3-1/4".

→ Indicates a change.

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: APPROX. DISTANCE TO CENTER OF FOCUSING-COIL AIR GAP.

NOTE 5: DISTANCE TO INTERNAL POLE PIECES. PLANE THROUGH 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 AND FOCUSING-COIL AIR GAP MUST BE WITHIN THIS SPACE.

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

NOTE 8: EXTERNAL CONDUCTIVE COATING MUST BE GROUNDED.

NOTE 9: FOR TUBE SUPPORT WHICH MUST NOT COVER SPECIFIED AREA AROUND ANODE CAP.

92CM-6663R2
AVERAGE CHARACTERISTICS

$E_f = 8.3$ VOLTS
ANODE VOLTS = 9000
GRID-N\textsuperscript{\textdegree}2 VOLTS = 250
GRID-N\textsuperscript{\textdegree}1 BIASED TO CUTOFF
RASTER SIZE 6''x8'' (FOCUSED)

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PEAK GRID-N\textsuperscript{\textdegree}1 SIGNAL VOLTS

HIGHLIGHT BRIGHTNESS - FOOT-LAMBERTS

ANODE CURRENT - MICROAMPERES

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TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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