MONITOR KINESCOPE
ALUMINIZED SCREEN
ELECTROSTATIC FOCUS MAGNETIC DEFLECTION

DATA

General:
Heater, for Unipotential Cathode:
  Voltage: 6.3 ac or dc volts
  Current: 0.6 amp
Direct Interelectrode Capacitances:
  Grid No.1 to all other electrodes: 6 μf
  Cathode to all other electrodes: 5 μf
Faceplate, Spherical: Filterglass
  Light transmission (Approx.): 76%
Phosphor for curves, see front of this section.
  P4—Sulfide Type
  Aluminized
Fluorescence: White
  Phosphorescence: White
  Persistence: Short
Focusing Method: Electrostatic
Deflection Method: Magnetic
Deflection Angle (Approx.): 50°
Overall Length: 16–5/8" ± 3/8"
Greatest Diameter of Bulb: 10–1/2" ± 1/16"
Minimum Useful Screen Diameter: 9–1/8"
Picture Size (Within minimum useful screen area): 8" x 6"
Weight (Approx.): 10 lbs
Operating Position: Any
Cap.: Recessed Small Cavity (JETEC No.1–21)
Bulb: J84
Base: Small-SHELL Duodecal 6-Pin (JETEC No.B6–63)
  Basing Designation for BOTTOM VIEW: 12Q

Pin 1—Heater
Pin 2—Grid No.1
Pin 6—Grid No.3
Pin 10—Grid No.2
Pin 11—Cathode

Maximum Ratings, Design-Center Values:
ULTOR VOLTAGE: 20000 max. volts
GRID-No.3 VOLTAGE: 3000 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: 180 max. volts
  Heater positive with respect to cathode: 180 max. volts

Indicates a change.

8-57
ELECTRON TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
Equipment Design Ranges:

For any uktor voltage \(E_{c4}\) between 10000* and 20000 volts and grid-No.2 voltage \(E_{c2}\) between 150 and 410 volts

Grid-No.3 Voltage for focus with uktor current of 100 \(\mu\)a. . . . . . 11.7% to 15.9% of \(E_{c4}\) volts

Grid-No.1 Voltage for visual extinction of 8" x 6" raster . . . . . . . 9% to 24% of \(E_{c2}\) volts

Maximum Grid-No.3 Current** . . . . . . . . . . . . . See Curves

Grid-No.2 Current . . . . . . . . . . -15 to +15 \(\mu\)a

Field Strength of Adjustable Centering Magnet . . . . . . . . . . 0 to 8 gausses

Examples of Use of Design Ranges:

For uktor voltage of 12000 14000 volts
and grid-No.2 voltage of 200 200 volts.

Grid-No.3 Voltage for focus with uktor current of 100 \(\mu\)a. . . . . 1400 to 1900 1640 to 2225 volts

Grid-No.1 Voltage for visual extinction of 8" x 6" raster . . . . . . . -18 to -48 -18 to -48 volts

Maximum Circuit Values:

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

* Brilliance and definition decrease with decreasing uktor voltage. In general, the uktor voltage should not be less than 10,000 volts.

** Grid-No.3 current increases as the uktor voltage is decreased.

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

\(\Rightarrow\) Indicates a change.

NOTE 2: REFERENCE LINE IS DETERMINED BY POSITION WHERE REFERENCE-LINE GAUGE (JETEC No. 112) 1.500" + 0.003" - 0.000" 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: TUBE SUPPORT MUST BE KEPT AT LEAST 2" AWAY FROM BULB TERMINAL.
AVERAGE GRID-DRIVE CHARACTERISTIC

$E_C = 6.3$ VOLTS
ULTOR (GRID-NR 4-AND-COLLECTOR) VOLTS = 12000
GRID-NR 3 VOLTS ADJUSTED TO GIVE FOCUS AT AVERAGE RASTER BRIGHTNESS.
GRID NR 1 BIASED TO RASTER CUTOFF.
RASTER SIZE = 8' x 6"
AVERAGE GRID-DRIVE CHARACTERISTICS

E_f = 6.3 VOLTS
ULTOR (GRID-N°4 AND COLLECTOR) VOLTS = 12000
GRID-N°3 VOLTS ADJUSTED TO GIVE FOCUS AT AVERAGE RASTER BRIGHTNESS
GRID N°1 BIASED TO CUTOFF OF RASTER
RASTER SIZE = 6" x 6"

VIDEO SIGNAL VOLTS FROM CUTOFF
ULTOR MICROAMPERES

MAR. 21, 1952
TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-7773
GRID-DRIVE CHARACTERISTICS

$E_f = 6.3$ VOLTS
ULTOR (GRID-N° 4 AND COLLECTOR) VOLTS = 12000
GRID-N°3 VOLTS ADJUSTED TO GIVE FOCUS AT AVERAGE RASTER BRIGHTNESS
GRID N°1 BIASED TO CUTOFF OF RASTER
RASTER SIZE = 8' x 6'

MAX. GRID-N°3 MICROAMPERES

VIDEO SIGNAL VOLTS FROM CUTOFF

MAR. 21, 1952 TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY 92CM-7775