23K4
CATHODE RAY TUBE

23 INCH, RECTANGULAR, GLASS
FOCUS -- ELECTROSTATIC
DEFLECTION -- MAGNETIC
114 DEGREE DEFLECTION ANGLE
FACE PLATE -- SPHERICAL GRAY
NON ION TRAP GUN
ALUMINIZED SCREEN
EXTERNAL CONDUCTIVE COATING

The 23K4 is a 23 inch electrostatic-focus and magnetic deflection glass lightweight picture tube. Outstanding features include a short over-all length, a small neck diameter and a non ion-trap gun. The fluorescent screen is aluminized to increase light output and reduce undesirable screen charging. An external conductive coating is provided to serve as a filter capacitor when grounded.

ELECTRICAL DATA
Focusing Method
Electrostatic
Deflection Angle, Approximate
Horizontal
102 degrees
Vertical
84 degrees
Diagonal
114 degrees
Direct Interelectrode Capacitance
Cathode to all other electrode, approximate
5 uuf
Grid #1 to all other electrodes, approximate
6 uuf
External Conductor Coating to Anode
2500 max. uuf
2000 min. uuf
600 ± 10% ma.
Heater Warm Up Time
11 sec.

OPTICAL DATA
Phosphor Number
Pl4 Aluminized
Light Transmittance at Center Approx.
76 Percent

MECHANICAL DATA
Overall Length
13 5/16 ± 5/16 inches
Greatest Dimensions of Tube
Diagonal
23 7/16 ± 1/8 inches
Width
20 1/2 ± 1/8 inches
Height
16 1/2 ± 1/8 inches

from JEDEC release #2608, Oct. 19, 1959
MECHANICAL DATA (cont'd)

Minimum Useful Screen Dimensions (Projected)
- Diagonal: 22 1/16 inches
- Horizontal axis: 19 1/4 inches
- Vertical axis: 15 1/4 inches
- Area: 278 sq. inches
- Neck Length: 1 1/16 x 3/16 inches
- Bulb Contact: JETEC No. JL-21
- Base: JETEC No. B6-226
- Basing: 8J8

Bulb Contact Alignment
- Anode Contact Aligns with Rev. No. 4 * 30 degrees

RATINGS (Design Maximum System)

Unless otherwise specified, voltage values are positive and measured with respect to cathode.

- Maximum Anode Voltage: 23,000 volts
- Minimum Anode Voltage: 15,000 volts
- Maximum Grid #1 (Focusing Electrode) Voltage: -500 to +1000 volts
- Minimum Grid 2 Voltage: 400 volts
- Maximum Grid 2 Voltage: 700 volts
- Grid #1 Voltage
  - Maximum Negative Value: 140 volts DC
  - Maximum Negative Peak Value: 200 volts
  - Maximum Positive Value: 0 volts DC
  - Maximum Positive Peak Value: 2 volts
- Maximum Heater Voltage: 6.9 volts
- Minimum Heater Voltage: 5.7 volts
- Maximum Heater-Cathode Voltage
  - Heater negative with respect to cathode
    - During warm up period not to exceed 15 sec.: 140 volts
    - After equipment warm-up period: 180 volts
  - Heater positive with respect to cathode: 180 volts

TYPICAL OPERATING CONDITIONS

- Anode Voltage: 16,500 volts DC
- Grid #1 Voltage (Focusing Electrode (Notes 2 & 3): 250 volts DC
- Grid #2 Voltage: 450 volts DC
- Grid #1 Voltage (Note 1): ~28 to ~72 volts DC

MAXIMUM CIRCUIT VALUES

- Maximum Grid #1 Circuit Resistance: 1.5 max. megohm
- Grid No. 2 Circuit Resistance: 0.1 min. megohm
- Focusing Electrode Circuit Resistance: 0.1 min. megohm

Protective resistance in Grid No. 2 and focusing electrical circuits is advisable to prevent damage to tube. If applicable, one resistor common to both circuits may be used.
NOTES:

1. Visual extinction of focused raster.

2. With the combined Grid#1 bias voltage and video-signal voltage adjusted to give an anode current of 150 microamperes on a 19 1/4" x 15 1/4" pattern from RCA 2P21 monoscope or equivalent.

3. Individual tubes will have satisfactory focus at some value between 0 and 500 volts.

CATHODE RAY TUBE DEPARTMENT

GENERAL ELECTRIC COMPANY

SYRACUSE, NEW YORK
DIAGRAM NOTES

1. THE REFERENCE LINE IS DETERMINED BY THE INTERSECTION OF THE PLANE C-C\(^2\) OF GAGE (EIA NO. 126) WITH THE GLASS FUNNEL.

2. DEFLECTION ANGLE ON THE DIAGONAL IS 114°.

3. ANODE TERMINAL ALIGNS WITH PIN NO. 4 +/- 30 DEGREES.

4. USE A NON-RIGIDLY MOUNTED SOCKET WITH FLEXIBLE LEADS. BOTTOM CIRCUMFERENCE OF BASE WAFFER WILL FALL WITHIN 1-3/4 INCH DIAMETER CIRCLE CONCENTRIC WITH THE BULB AXIS.

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