CHARACTERISTICS

GENERAL DATA

Focusing Method .................................. Electrostatic
Deflection Method ................................ Magnetic
Deflection Angles (Approx.)
  Horizontal ................................... 85 Degrees
  Diagonal ..................................... 90 Degrees
  Vertical .................................... 68 Degrees
Phosphor ........................................... Aluminized P4
Fluorescence ..................................... White
Persistence ....................................... Short to Medium
Faceplate .......................................... Bonded Shield
  Gray Filterglass Safety Plate Laminated Directly
  to Face of Tube
Light Transmittance of Faceplate Assembly
  (Approx.) ..................................... 45 Percent

ELECTRICAL DATA

Heater Voltage ................................... 6.3 Volts
Heater Current ................................... 0.6 ± 5 % Ampere
Heater Warm-up Time1 ............................... 11 Seconds
Direct Interelectrode Capacitances (Approx.)
  Cathode to All Other Electrodes .................. 5 µuf
  Grid No. 1 to All Other Electrodes ............... 6 µuf
External Conductive Coating to Anode2 ............. 2500 µuf Max.
  2000 µuf Min.

MECHANICAL DATA

Minimum Useful Screen Dimensions
  (Maximum Assured) .............................. 24 ¼ x 18 5/8 Inches
Minimum Useful Screen Area ....................... 425 Square Inches
Neck Length ..................................... 6 ± 3/8 Inches
Overall Length ................................... 21 3/8 ± 3/8 Inches
Bulb .............................................. J214 ½A
Faceplate ......................................... FP-214 ½A1
Bulb Contact (Recessed Small Cavity Cap) ........... J1-21
Base ............................................. B6-203
Basing ........................................... 12L
Weight (Approx.) .................................. 54 Pounds

RATINGS

MAXIMUM RATINGS (Design Maximum Values)

Grid Drive Service3
  Maximum Anode Voltage ......................... 25,000 Volts dc
  Minimum Anode Voltage ........................ 11,000 Volts dc
  Grid No. 4 Voltage (Focusing Electrode) .... -550 to +1100 Volts dc
  Maximum Grid No. 2 Voltage ................... 550 Volts dc
  Minimum Grid No. 2 Voltage ................... 200 Volts dc
  Grid No. 1 Voltage
    Negative Bias Value .......................... 155 Volts dc
    Negative Peak Value ........................ 220 Volts dc
    Positive Bias Value ......................... 0 Volts
    Positive Peak Value ......................... 2 Volts
  Peak-Heater-Cathode Voltage
    Heater Negative with Respect to Cathode
      During Warm-up Period not to Exceed 15 Sec. 450 Volts
      After Equipment Warm-up Period ............... 200 Volts
    Heater Positive with Respect to Cathode .......... 200 Volts

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MAXIMUM RATINGS (Design Maximum Values) Continued

Cathode Drive Service
Maximum Anode Voltage ........................................... 25,000 Volts dc
Minimum Anode Voltage ........................................... 11,000 Volts dc
Grid No. 4 Voltage (Focusing Electrode) .................. −400 to +1250 Volts dc
Maximum Grid No. 2 Voltage ....................................... 700 Volts dc
Minimum Grid No. 2 Voltage ....................................... 350 Volts dc
Cathode Voltage
Positive Bias Value .................................................. 155 Volts dc
Positive Peak Value ............................................... 220 Volts dc
Negative Bias Value ............................................... 0 Volts dc
Negative Peak Value ............................................. 2 Volts dc
Peak Heater-Cathode Voltage
Heater Negative with Respect to Cathode During
Warm-up Period not to Exceed 15 Seconds ............. 450 Volts
After Equipment Warm-up Period ....................... 200 Volts
Heater Positive with Respect to Cathode ............... 200 Volts

TYPICAL OPERATING CONDITIONS

Grid Drive Service
Anode Voltage ......................................................... 18,000 Volts dc
Grid No. 4 Voltage for Focus ................................... 0 to 400 Volts dc
Grid No. 2 Voltage .................................................. 400 Volts dc
Grid No. 1 Voltage Required for Cutoff .............. −48 to −96 Volts dc
Cathode Drive Service
Anode Voltage ......................................................... 18,000 Volts dc
Grid No. 4 Voltage for Focus ................................... 0 to 400 Volts dc
Grid No. 2 Voltage .................................................. 400 Volts dc
Cathode Voltage Required for Cutoff ................ +46 to +80 Volts dc

CIRCUIT VALUES

Grid No. 1 Circuit Resistance ................................. 1.5 Megohms Max.

NOTES:
1. Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times rated heater voltage divided by rated heater current.
2. External conductive coating must be grounded.
3. Unless otherwise specified, voltages are positive with respect to cathode.
4. Unless otherwise specified, voltages are positive with respect to Grid No. 1.
5. Visual extinction of focused raster. Extinction of stationary focused spot will require that these values be increased by about 5 volts.

WARNING:

X-ray radiation shielding may be necessary to protect against possible danger of personal injury from prolonged exposure at close range if this tube is operated at higher than the manufacturer’s Maximum Rated Anode Voltage or 16,000 volts, whichever is less.
DIAGRAM NOTES:
1. The plane through the tube axis and Pin No. 6 may vary from the plane through the tube axis and anode terminal by an angular tolerance (measured about the tube axis) of \( \pm 30^\circ \). Anode terminal is on same side as Pin No. 6.
2. With tube neck inserted through flared end of reference line gauge JEDEC No. G-116 and with tube seated in gauge, the reference line is determined by the intersection of the Plane CC' of the gauge with the glass funnel.