CHARACTERISTICS

GENERAL DATA

Focusing Method .................................. Electrostatic
Deflection Method ................................ Magnetic
Deflection Angles (Approx.)
  Horizontal ...................................... 99 Degrees
  Diagonal ........................................ 110 Degrees
  Vertical ......................................... 82 Degrees
Phosphor ........................................... Aluminized P4
  Fluorescence .................................... White
  Persistence ...................................... Short to Medium
Faceplate
  (Gray Filter Glass Safety Plate Laminated)
  (Directly to Face of Tube)
  Light Transmittance of Faceplate Assembly
  (Approx.) ....................................... 40 Percent

ELECTRICAL DATA

Heater Voltage .................................... 6.3 Volts
Heater Current .................................... 0.60 ± 5% Ampere
Heater Warm-up Time¹ ................................ 11 Seconds
Direct Inter-electrode Capacitances
  (Approx.)
  Cathode to All Other Electrodes .............. 5 μF
  Grid No. 1 to All Other Electrodes ........... 6 μF
  External Conductive Coating to Anode² ........ 2500 μF Max.
  .................................................. 1700 μF Min.

MECHANICAL DATA

Minimum Useful Screen Dimensions
  (Maximum Assured)
  Height .......................................... 15¼ Inches
  Width ........................................... 19¾ Inches
  Diagonal ........................................ 22¾ Inches
  Area ............................................. 282 Sq. Inches
Neck Length ...................................... 5½ Inches
Overall Length ................................... 15½ Inches
Bulb ............................................. J187A or Equivalent
Safety Plate ..................................... FP198A or Equivalent
Bulb Contact (Recessed Small Cavity Cap) .......... J1-21
Base ............................................. B7-219
Basing ........................................... 8KP
Weight (Approx) .................................. 32½ Pounds

RATINGS

MAXIMUM RATINGS (Design Maximum Values)

Cathode Drive Service³

  Maximum Anode Voltage ......................... 22,000 Volts dc
  Minimum Anode Voltage ......................... 13,200 Volts dc
  Grid No. 3 Voltage (Focusing Electrode) .......... −550 to +1100 Volts dc
  Grid No. 2 Voltage ................................ 70 Volts dc
  Cathode Voltage
  Positive Bias Value ............................. 154 Volts dc
  Positive Peak Value ............................ 220 Volts dc
  Negative Bias Value ............................ 0 Volts dc
  Negative Peak Value ............................ 2 Volts

SYLVANIA
ELECTRONIC TUBES
A Division of Sylvania Electric Products Inc.

PICTURE TUBE OPERATIONS

SENeca FALLS, new york

Prepared and Released By The TECHNICAL PUBLICATIONS SECTION
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FILE UNDER TELEVISION PICTURE TUBES
MAXIMUM RATINGS (Design Maximum Values) Cathode Drive Service\(^3\) (Cont’d.)

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 (Cathode Drive Service)\(^8\)

- Anode Voltage ................................................................. 16,000 Volts dc
- Grid No. 3 Voltage for Focus ............................................. 0 to +400 Volts dc
- Grid No. 2 Voltage\(^3\) ......................................................... 50 Volts dc
- Cathode Voltage Required for Cutoff\(^4\) ................................... +32 to +47 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 the rated heater voltage 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 the rated heater voltage divided by the rated heater current.

2. External conductive coating must be grounded.

3. Voltages are positive with respect to Grid No. 1 unless indicated otherwise.

4. Visual extinction of focused raster. Extinction of stationary focused spot will require that these values be about 5 volts more positive.

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.
OUTLINE

DIAGRAM NOTES:

1. Reference line is determined by plane C-C' of JEDEC No. 126 Reference Line Gauge, when the gauge is seated against the bulb.

2. Base Pin No. 8 aligns with horizontal centerline (A-A') within 30° and is on same side as anode contact, J1-21.

3. Planes perpendicular to the axis and passing through points X, Y and Z are located as follows:

   Plane tangent to crown of face, to plane of X = 0.758" Nom.
   Plane of X to plane of Y = 0.463" ± .030
   Plane of X to plane of Z = 0.970" ± .050