CHARACTERISTICS

GENERAL DATA

Focusing Method ........................................ Electrostatic
Deflection Method ....................................... Electrostatic

Types*  5ABP1  5ABP4  5ABP7  5ABP11
Fluorescence Green White Blue Blue
Phosphorescence ............. ............. Yellow .............
Persistence Medium Medium Long Short

Faceplate ................................................ Clear

*In addition to the types shown, the 5ABP- can be supplied with several other screen phosphors.

ELECTRICAL DATA

Heater Voltage ........................................... 6.3 Volts
Heater Current .......................................... 0.6 Ampere

Direct Interelectrode Capacitances (Nominal)
Cathode to All Other Electrodes ............... 5.0 μF
Grid No. 1 to All Other Electrodes ............. 8.0 μF
Between Deflecting Plates 1-2 ................. 2.5 μF
Between Deflecting Plates 3-4 ................. 1.3 μF
Deflecting Plate 1½ to All Other Electrodes .... 9.0 μF
Deflecting Plate 2½ to All Other Electrodes .... 9.0 μF
Deflecting Plate 3½ to All Other Electrodes .... 5.0 μF
Deflecting Plate 4½ to All Other Electrodes .... 6.0 μF

MECHANICAL DATA

Minimum Useful Screen Diameter ................. 4-9/16 Inches
Bulb Contact (Recessed Small Ball Cap) .......... J1-22
Bulb .................................................. J42K
Base (Medium Shell Diheptal 12-Pin) ............. B12-37
Basing ............................................... 14J

Base Alignment
The plane through the tube axis and each of the following items may vary from the trace produced by D1 and D2 by the following angular tolerances (measured about the tube axis): Pin 5, 10 Degrees; side terminal (on same side of tube as Pin No. 5), 10 Degrees.
Angle between D1-D2 trace and D3-D4 trace is 90 ± 1.5 Degrees.

Weight (approx.) ...................................... 2½ Pounds
Mounting Position ................................. Any
RATINGS

MAXIMUM RATINGS (Absolute Maximum Values)

- Anode No. 3 Voltage: 6600 Volts dc
- Anode No. 2 Voltage: 2860 Volts dc
- Ratio of Anode No. 3 Voltage to Anode No. 2 Voltage: 2.3:1 Maximum
- Anode No. 1 Voltage: 1100 Volts dc
- Grid No. 1 Voltage
  - Negative Bias Value: 220 Volts dc
  - Positive Bias Value: 0 Volts dc
  - Positive Peak Value: 2 Volts
- Peak Heater-Cathode Voltage
  - Heater Negative with Respect to Cathode: 140 Volts dc
  - Heater Positive with Respect to Cathode: 140 Volts dc
- Peak Voltage Between Anode No. 2 and Any Deflection Plate: 550 Volts

TYPICAL OPERATING CONDITIONS

- Anode No. 3 Voltage: 3000 Volts dc
- Anode No. 2 Voltage: 1500 Volts dc
- Anode No. 1 Voltage for Focus: 300 to 515 Volts dc
- Grid No. 1 Voltage Required for Cutoff: −39 to −65 Volts dc
- Deflection Factor
  - Deflecting Plates 1-2: 40 to 54 Volts dc/Inch
  - Deflecting Plates 3-4: 27 to 36 Volts dc/Inch

CIRCUIT VALUES

- Grid No. 1 Circuit Resistance: 1.5 Megohms Max.
- Deflection Circuit Resistance: 5 Megohms Max.

NOTES:

1. Deflecting Plate 1 is Pin No. 11
   - Deflecting Plate 2 is Pin No. 10
   - Deflecting Plate 3 is Pin No. 7
   - Deflecting Plate 4 is Pin No. 8
   With D1 positive with respect to D2, the spot is deflected toward Pin No. 5
   With D3 positive with respect to D4, the spot is deflected toward Pin No. 2

2. The product of the Anode No. 2 Voltage and the Average Anode No. 2 Current should be limited to 6 Watts.

3. It is recommended that the Anode No. 3 voltage be not less than 3000 Volts for high-speed scanning.

4. In general Anode No. 2 voltage should not be operated at less than 1500 Volts.

5. Visual extinction of undeflected focused spot.

6. The deflecting electrodes D3 and D4 are designed to have extra-high deflection sensitivity and consequently produce less than full-screen deflection. With post deflection acceleration, the length of deflection may be limited to 4 inches; without post-deflection acceleration, deflection to full screen diameter will ordinarily be obtained. These electrodes are, therefore, more suitable for the signal voltage than for the time base voltage.

7. Deflecting Plates 1-2 are nearer the screen.

8. Deflecting Plates 3-4 are nearer the base.

9. It is recommended that the deflecting electrode resistances be approximately equal.
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