

# 10KP- CATHODE-RAY TUBES

The Type 10KP- Cathode-ray Tubes are magnetically focussed and deflected cathode-ray tubes designed for radar systems and special applications requiring long persistence and large screen size. This tube is typical of the radar-type tubes available from Du Mont.

Radar types similar to the Type 10KP- include the 5-inch 5FP-, the 7-inch 7BP- and the 12-inch 12SP-. Selection of a tube of this type would be determined by the screen size desired and the exact electrical characteristics needed to fit the application.



## GENERAL CHARACTERISTICS

### Electrical

|   |                       |
|---|-----------------------|
| Heater Voltage .....                        | 6.3 Volts             |
| Heater Current .....                        | $0.6 \pm 10\%$ Ampere |
| Focusing Method .....                       | Magnetic              |
| Deflecting Method .....                     | Magnetic              |
| Deflecting Angle (Approx.) .....            | 50 Degrees            |
| Phosphor .....                              | No. 7                 |
| Fluorescence .....                          | Blue                  |
| Phosphorescence .....                       | Yellow                |
| Persistence .....                           | Long                  |
| Direct Interelectrode Capacitances, Approx. |                       |
| Cathode to all other electrodes .....       | 5 $\mu$ f.            |
| Grid No. 1 to all other electrodes .....    | 6.5 $\mu$ f.          |

### Mechanical

|   |  |
|---|--|
| Overall Length .....  | $17\frac{5}{8} \pm \frac{3}{8}$ Inches |
| Greatest Diameter of Bulb .....   | $10\frac{1}{2} \pm \frac{1}{8}$ Inches |
| Minimum Useful Screen Diameter .....  | 9 Inches                               |
| Bulb Contact (Recessed small cavity cap) .....                                | J1-21                                  |
| Base (Small shell duodecal 7-pin) .....                                       | B7-51                                  |
| Basing .....  | 12D                                    |
| Bulb Contact Alignment J1-21 contact aligns with vacant pin position No. 3 .. | $\pm 10$ Degrees                       |

## MAXIMUM RATINGS—(Design Center Values)

|   |                       |
|---|-----------------------|
| Anode Voltage .....                           | 10,000 Max. Volts D-C |
| Grid No. 2 Voltage .....                      | 700 Max. Volts D-C    |
| Grid No. 1 Voltage .....                      |                       |
| Negative Bias Value .....                     | 180 Max. Volts D-C    |
| Positive Bias Value <sup>1</sup> .....        | 0 Max. Volts D-C      |
| Positive Peak Value .....                     | 2 Max. Volts          |
| Peak Grid No. 1 Drive from Cut-off .....      | 65 Max. Volts         |
| Peak Heater-Cathode Voltage .....             |                       |
| Heater Negative with respect to cathode ..... | 150 Max. Volts D-C    |
| Heater Positive with respect to cathode ..... | 150 Max. Volts D-C    |

## TYPICAL OPERATING CONDITIONS

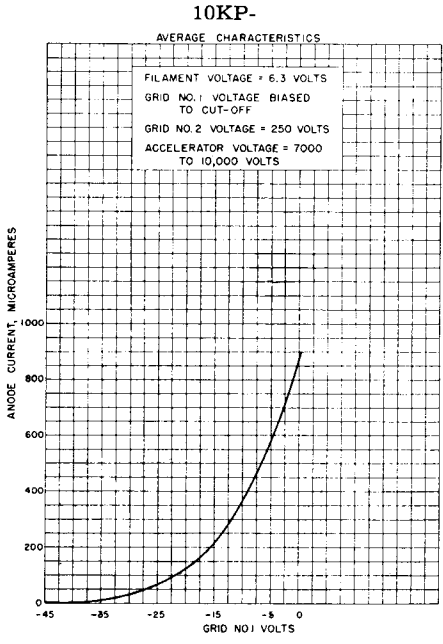
|  |                      |
|--|----------------------|
| Anode Voltage .....                      | 9,000 Volts D-C      |
| Grid No. 2 Voltage .....                 | 250 Volts D-C        |
| Grid No. 1 Voltage <sup>2</sup> .....    | -27 to -63 Volts D-C |
| Focusing Coil Current <sup>3</sup> ..... | 105 Approx. Ma. D-C  |

# MAXIMUM CIRCUIT VALUES

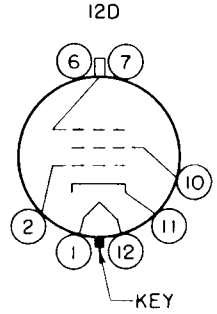
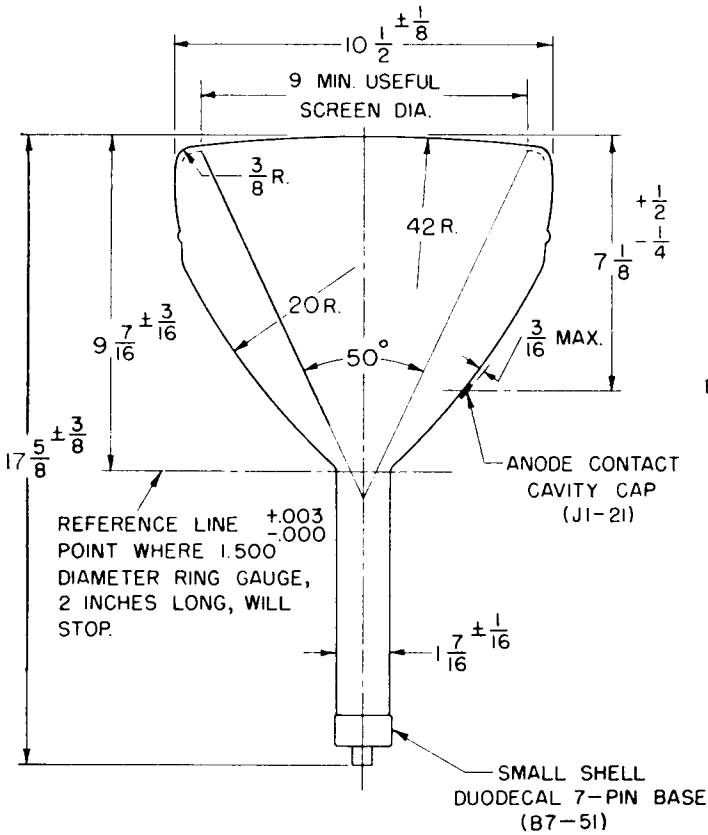
Grid No. 1 Circuit Resistance ..... 1.5 Max. Megohms

## NOTES

1. At or near this rating, the effective resistance of the anode supply should be adequate to limit the anode input power to 6 watts.
2. Visual extinction of undeflected focused spot.
3. For JETEC standard focus coil No. 106, or equivalent, with the Grid No. 1 voltage adjusted to produce an anode current of 200 microamperes and with distance (D) from reference line to center of air gap equal to 3.25 inches.



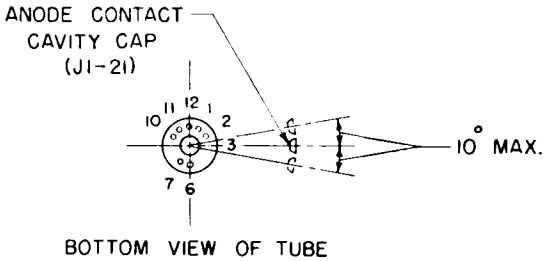
TYPE 10KP-



BOTTOM VIEW OF BASE

PIN NO. ELEMENT

- 1 — HEATER
- 2 — GRID NO. 1
- 10 — GRID NO. 2
- 11 — CATHODE
- 12 — HEATER
- CAP — ANODE



BOTTOM VIEW OF TUBE