



Excellence in Electronics

**TYPE
5AKP24**

The 5AKP24 is a flying spot scanner cathode ray tube, employing magnetic focus and deflection. This type features high resolution and a metal backed screen for high brightness. The external coating on the neck of the tube should be connected to ground to prevent corona between the yoke and neck. An external insulating coating on the bulb cone reduces arcing over the bulb.

MECHANICAL DATA

MINIMUM USEFUL SCREEN DIAMETER

(Maximum assured diameter) 4 1/4 Inches

BASE: B5-57

BASING: 12 G

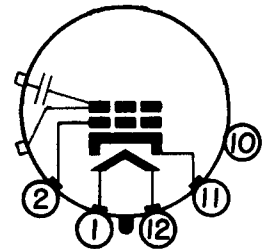
ANODE CONTACT: J1-21

ANODE CONTACT ALIGNS WITH VACANT PIN #3 ± 10°

TERMINAL CONNECTIONS:

- | | |
|----------------------|-----------------------------|
| Pin 1 Heater | Pin 11 Cathode |
| Pin 2 Grid #1 | Pin 12 Heater |
| Pin 10 No Connection | Cap Grid #2, Anode (Note 4) |

MOUNTING POSITION: Any



12G

BOTTOM VIEW

GENERAL DATA

- | | |
|-------------------------------|-----------------|
| Phosphor Number | P24 |
| Fluorescent Color | Light Green |
| Persistence | Extremely Short |
| Focusing Method | Magnetic |
| Deflecting Method | Magnetic |
| Deflection Angle, approximate | 50 degrees |

ELECTRICAL DATA

DIRECT INTERELECTRODE CAPACITANCE:(approx.) (pfdS)

- | | |
|------------------------------|----------------------|
| Cathode to all | 3.5 |
| Grid #1 to all | 4.0 |
| External Coating Capacitance | 100 min.
500 max. |

MAXIMUM RATINGS:(Design Center Values)

- | | |
|--|-------------------|
| Heater Voltage | 6.3 volts |
| Heater Current at 6.3 Volts | .60 ± 10% amperes |
| Anode Voltage | 40,000 volts DC |
| Grid #1 Voltage | |
| Negative Bias Value | 350 volts DC |
| Positive Peak Value | 2 volts |
| Positive Bias Value | 0 volts DC |
| Peak Heater-Cathode Voltage (Note #1) | |
| Heater Negative with Respect to Cathode | |
| During Warmup Period not to exceed 15 Sec. | 410 volts |
| After Equipment Warmup Period | 180 volts |
| Heater Positive with Respect to Cathode | 180 volts |

CHARACTERISTICS AND TYPICAL OPERATION:

- | | |
|--|-------------------|
| Anode Voltage | 30,000 volts |
| Grid #1 Voltage (Note #2) | -80 to -140 volts |
| Focusing Coil Current, approximate (Note #3) | 250 Ma. |

MAXIMUM CIRCUIT VALUES:

- | | |
|----------------------------|-----------|
| Grid #1 Circuit Resistance | 1.5 megs. |
|----------------------------|-----------|

Tentative Data

INDUSTRIAL COMPONENTS DIVISION

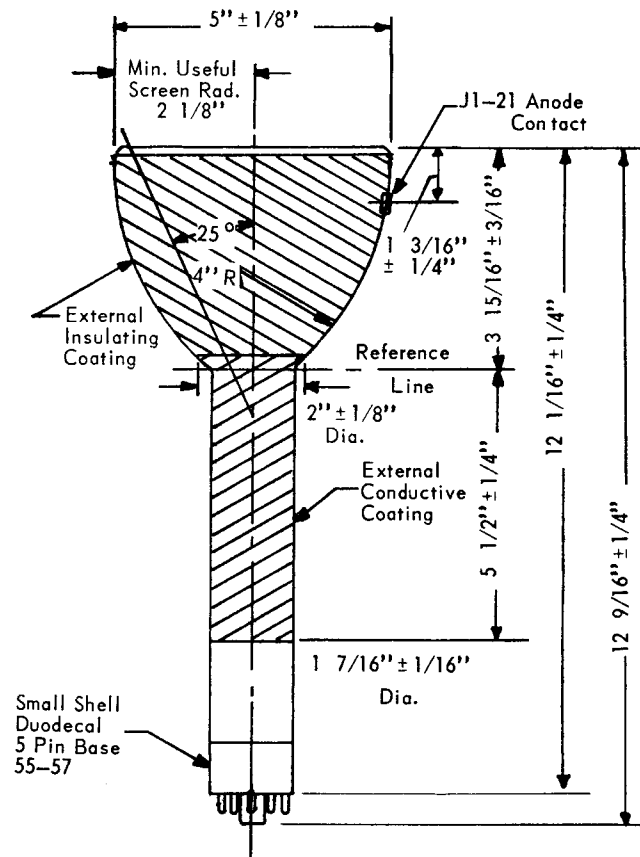
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CATHODE RAY TUBE

NOTES:

- Note 1 Cathode should be returned to one side or to the mid-top of the heater transformer winding.
- Note 2 For visual extinction of the undeflected focused spot.
- Note 3 For standard focus coil JEDEC #106 or equivalent, with the combined Grid #1 bias voltage and video signal voltage adjusted for 200 microamperes of anode current.
- Note 4 The anode contact aligns with vacant pin position #3, $\pm 10^\circ$.
- Note 5 The reference line is determined by the position where the reference line gauge JEDEC #112 rests against the funnel. The center line of the bulb will not deviate more than 2° in any direction from the perpendicular erected at the center of the bottom of the base.



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