TUNG-SOL

CATHODE RAY

THE 24AP4, 24AP4A AND 24AP4B ARE DIRECT-VIEW PICTURE TUBES DESIGNED FOR USE IN TELEVISION APPLICATIONS. THEY ARE IDENTICAL EXCEPT FOR THE ALUMINIZED SCREEN ON THE 24AP4A AND THE FACEPLATE TREATED TO ELIMINATE SPECULAR REFLECTION ON THE 24AP4B. THEIR COMMON FEATURES INCLUDE:

- UNIPOTENTIAL CATHODE
- ROUND METAL CONSTRUCTION
- MAGNETIC FOCUS & DEFLECTION
- GREY FILTER FACEPLATE
- EXTERNAL SINGLE FIELD ION TRAP
- 16 9/16" X 22 1/8" RASTER SIZE

ELECTRICAL DATA

- Focusing Method: Magnetic
- Deflecting Method: Magnetic
- Deflection Angle (Approx.): 70°
- Direct Interelectrode Capacitances (Approx.):
  - Cathode to All Other Electrodes: 5 μuf
  - Grid #1 to All Other Electrodes: 6 μuf

OPTICAL DATA

- Phosphor Number: No. 4
- Fluorescent Color: White
- Phosphorescent Color: White
- Persistence: Medium
- Faceplate Light Transmission at Center (Approx.): 62 Percent

MECHANICAL DATA

- Overall Length: 23 15/16 ± 1/2 inches
- Greatest Diameter of Bulb: 24 ± 1/4 inches
- Minimum Useful Screen Diameter: 22 1/8 inches
- Bulb Contact: Metal Shell Lip
- Base: Small Shell Duodecal 5 Pin
- Basing: B5-57 12D

PIN CONNECTIONS

- Pin 1 - Heater
- Pin 2 - Grid No. 1
- Pin 10 - Grid No. 2
- Pin 11 - Cathode
- Pin 12 - Metal Shell Lip: Anode
- Grid No. 3

CONTINUED ON FOLLOWING PAGE
RATINGS
DESIGN CENTER VALUES

HEATER VOLTAGE 6.3 VOLTS
HEATER CURRENT 0.6 AMP.
MAXIMUM DC ANODE, GRID #3 VOLTAGE A 16,000 VOLTS
MAXIMUM DC GRID #2 VOLTAGE 410 VOLTS
MAXIMUM GRID #1 VOLTAGE:
DC NEGATIVE-BIAS VALUE 125 VOLTS
DC POSITIVE-BIAS VALUE 0 VOLTS
POSITIVE-PEAK VALUE 2 VOLTS
MAXIMUM DC PEAK HEATER—CATHODE VOLTAGE B
HEATER NEGATIVE WITH RESPECT TO CATHODE DURING WARM-UP PERIOD NOT TO EXCEED 15 SECONDS 410 VOLTS
AFTER EQUIPMENT WARM-UP PERIOD 150 VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE 150 VOLTS

A If this tube is operated at voltages in excess of 16,000 volts, X-ray radiation shielding may be necessary to avert possible danger from prolonged exposure at close range.

B Cathode should be returned to one side or to the mid-tap of the heater transformer winding.

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

DC ANODE, GRID #3 VOLTAGE 15,000 VOLTS
DC GRID #2 VOLTAGE 300 VOLTS
DC GRID #1 VOLTAGE C -33 TO -77 VOLTS
DC FOCUSING COIL CURRENT (APPROX.) 114 MA.
ION TRAP (RATED STRENGTH) APPROX. 36 GAUSSES

C Visual extinction of undeflected focused spot.

CIRCUIT VALUES

MAXIMUM GRID #1 CIRCUIT RESISTANCE 1.5 MEGOHMS