CATHODE RAY

THE 30BP4 IS A DIRECT-VIEW PICTURE TUBE DESIGNED FOR USE IN TELEVISION APPLICATIONS. ITS FEATURES INCLUDE:

GREY FILTER FACEPLATE
MAGNETIC FOCUS & DEFLECTION
EXTERNAL SINGLE FIELD ION TRAP
UNIPOTENTIAL CATHODE
ROUND METAL CONSTRUCTION
25 9/16" X 19 1/4" RASTER SIZE

MECHANICAL DATA

FOCUSING METHOD MAGNETIC
DEFLECTING METHOD MAGNETIC
DEFLECTION ANGLE (APPROX.) 90 DEGREES
DIRECT INTERELECTRODE CAPACITANCES (APPROX.):
CATHODE TO ALL OTHER ELECTRODES 5 μf
GRID #1 TO ALL OTHER ELECTRODES 7 μf

OPTICAL DATA

PHOSPHOR NUMBER NO. 4
FLUORESCENT COLOR WHITE
PHOSPHORESCENT COLOR WHITE
PERSISTENCE MEDIUM
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.) 66 PERCENT

MECHANICAL DATA

OVERALL LENGTH 23 9/16 ± 1/2 INCHES
GREATEST DIAMETER OF BULB 30 1/8 ± 1/4 INCHES
MINIMUM USEFUL SCREEN DIAMETER 28 1/4 INCHES
BULB CONTACT METAL SHELL LIP
BASE SMALL SHELL DUODECAL 5 PIN
BASING B5-57

PIN CONNECTIONS

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

BOTTOM VIEW

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RATINGS
DESIGN CENTER VALUES

HEATER VOLTAGE
6.3 VOLTS
HEATER CURRENT
0.6 AMP.
MAXIMUM DC ANODE VOLTAGE\(^A\)
30 000 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:
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 PROTECT AGAINST POSSIBLE INJURY FROM PROLONGED EXPOSURE AT CLOSE RANGE. SUCH PROTECTION MAY BE PROVIDED BY THE PROTECTIVE FACE VIEWING WINDOW OF APPARATUS USING TUBES OF THIS TYPE.

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

DC ANODE VOLTAGE
12 000 VOLTS
DC GRID #2 VOLTAGE
300 VOLTS
DC GRID #1 VOLTAGE\(^B\)
-33 TO -77 VOLTS
DC FOCUSING COIL CURRENT\(^C\) (APPROX.)
95 ± 20\% MA.
DC ION TRAP CURRENT STANDARD COIL #111 (APPROX.)
75 ± 50\% MA.

\(^B\) VISUAL EXTINCTION OF UNDEFLUCTED FOCUSED SPOT.

\(^C\) FOR STANDARD FOCUS COIL #109, OR EQUIVALENT, WITH THE COMBINED GRID #1 BIAS VOLTAGE AND VIDEO-SIGNAL VOLTAGE ADJUSTED TO PRODUCE A HIGHLIGHT BRIGHTNESS OF 7 FOOT LAMBERTS ON A 25 3/16" X 25 3/16" PICTURE SIZE, DISTANCE FROM REFERENCE LINE TO CENTER OF AIR GAP OR FOCUS COIL SHALL BE 3.0 INCHES.

CIRCUIT VALUES

MAXIMUM GRID #1 CIRCUIT RESISTANCE
1.5 MEGOHMS