CATHODE RAY

THE 19EP4 IS A DIRECT VIEW PICTURE TUBE DESIGNED FOR USE IN TELEVISION APPLICATIONS. ITS FEATURES INCLUDE:

- GREY FILTER FACEPLATE
- MAGNETIC FOCUS AND DEFLECTION
- RECTANGULAR GLASS CONSTRUCTION
- UNIPOTENTIAL CATHODE
- 12" X 16" RASTER SIZE
- EXTERNAL DOUBLE FIELD ION TRAP

ELECTRICAL DATA

FOCUSING METHOD
DEFLECTING METHOD
DEFLECTION ANGLE (APPROX.)
  HORIZONTAL
  DIAGONAL

MAGNETIC
MAGNETIC
65 DEGREES
70 DEGREES

OPTICAL DATA

PHOSPHOR NUMBER
FLUORESCENT COLOR
PHOSPHORESCENT COLOR
PERSISTENCE

NO. 4
WHITE
WHITE
MEDIUM

MECHANICAL DATA

OVERALL LENGTH
GREATEST DIAMETER OF BULB
MINIMUM USEFUL SCREEN DIAMETER
BULB CONTACT
BASE
BASING
BULB CONTACT ALIGNMENT

21 1/8 ± 3/8 INCHES
18 5/8 ± 1/8 INCHES
17 21/32 INCHES
RECESSED SMALL CAVITY CAP
SMALL SHELL DUODECAL 5 PIN
120
J1-21 CONTACT ALIGNS WITH PIN POSITION #6 ± 30 DEGREES

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

CONTINUED ON FOLLOWING PAGE
RATINGS
DESIGN CENTER VALUES

HEATER VOLTAGE 6.3 VOLTS
HEATER CURRENT 0.6 AMP.
MAXIMUM DC ANODE VOLTAGE 19 000 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 125 VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE 125 VOLTS

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

DC ANODE VOLTAGE 13 000 VOLTS
DC GRID #2 VOLTAGE 250 VOLTS
DC GRID #1 VOLTAGE\(^A\) -26 to -63 VOLTS
DC FOCUSING COIL CURRENT\(^B\) (APPROX.) 95 ± 20\(^\circ\) MA.
DC ION TRAP CURRENT STANDARD COIL #108 (APPROX.) 75 ± 50\(^\circ\) MA.

\(^A\) VISUAL EXTINCTION OF UNDEFLICTED FOCUSED SPOT.

\(^B\) 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 25 FOOT LAMBERTS ON A 12\(^\circ\) X 16\(^\circ\) PICTURE SIZE. DISTANCE FROM REFERENCE LINE TO CENTER OF AIR GAP ON FOCUS COIL SHALL BE 3.25 INCHES.

CIRCUIT VALUES

MAXIMUM GRID #1 CIRCUIT RESISTANCE 1.5 MEGOHMS