CATHODE RAY

THE 17FP4 AND 17FP4A ARE DIRECT VIEW PICTURE TUBES DESIGNED FOR USE IN TELEVISION APPLICATIONS. THEY ARE IDENTICAL WITH THE FOLLOWING EXCEPTION:

17FP4 - PARTIAL EXTERNAL COATING  17FP4A - COMPLETE EXTERNAL COATING

THEIR COMMON FEATURES INCLUDE:

- ELECTROSTATIC FOCUS
- UNIPOENTIAL CATHODE
- RECTANGULAR GLASS CONSTRUCTION
- EXTERNAL SINGLE FIELD ION TRAP
- 16 1/4" X 11 1/8" RASTER SIZE

ELECTRICAL DATA

FOCUSING METHOD: ELECTROSTATIC
DEFLECTING METHOD: MAGNETIC
DEFLECTION ANGLE (APPROX.)
  HORIZONTAL: 65 DEGREES
  DIAGONAL: 70 DEGREES
DIRECT INTERELECTRODE CAPACITANCES (APPROX.)
  CATHODE TO ALL OTHER ELECTRODES: 5 µF
  GRID #1 TO ALL OTHER ELECTRODES: 6 µF
MAXIMUM EXTERNAL CONDUCTIVE COATING TO ANODE
  17FP4A: 2000 µF
  17FP4: 750 µF
MINIMUM EXTERNAL CONDUCTIVE COATING TO ANODE
  17FP4A: 750 µF
  17FP4: 500 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: 19 1/4 ± 3/8 INCHES
GREATEST DIMENSIONS OF BULB:
  DIAGONAL: 16 5/8 ± 1/8 INCHES
  WIDTH: 15 3/8 ± 1/8 INCHES
  HEIGHT: 12 1/4 ± 1/8 INCHES
MINIMUM USEFUL SCREEN DIMENSIONS:
  DIAGONAL: 15 1/2 INCHES
  WIDTH: 14 1/4 INCHES
  HEIGHT: 11 1/8 INCHES
BULB CONTACT: RECESSED SMALL CAVITY CAP
BASE: SMALL SHELL DUODECAL 6 PIN
BASING: B6-63
BULB CONTACT ALIGNMENT:
  J1-21 CONTACT Aligns WITH PIN POSITION #6 ± 30 DEGREES

PIN CONNECTIONS

PIN 1 - HEATER
PIN 2 - GRID NO. 1
PIN 6 - GRID NO. 4
PIN 10 - GRID NO. 2
PIN 11 - CATHODE

PIN 12 - HEATER ANODE CAP:
GRID #3,
GRID #5,
COLLECTOR

CONTINUED ON FOLLOWING PAGE...
RATINGS
DESIGN CENTER VALUES

HEATER VOLTAGE 6.3 VOLTS
HEATER CURRENT 0.6 AMPS
MAXIMUM DC GRID #3, GRID #5, COLLECTOR VOLTAGE\(^A\) 18000 VOLTS
MAXIMUM DC ANODE #1 VOLTAGE 5000 VOLTS
MAXIMUM DC GRID #2 VOLTAGE 410 VOLTS
MAXIMUM GRID #4 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 VOLTAGE IN EXCESS OF 16,000 VOLTS, X-RAY RADIATION SHIELDING MAY BE NECESSARY TO AVOID POSSIBLE DAMAGE TO PERSONAL INJURY FROM PROLONGED EXPOSURE AT CLOSE RANGE.

\(^B\) CATHODE SHOULD BE RETURNED TO ONE SIDE OR TO THE MIDTAP OF THE HEATER TRANSFORMER WINDING.

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

DC GRID #3, GRID #5, COLLECTOR VOLTAGE 12000 VOLTS
DC ANODE #1 VOLTAGE (FOCUSING ELECTRODE)\(^C\) 2300 TO 3550 VOLTS
DC GRID #2 VOLTAGE 300 VOLTS
DC GRID #1 VOLTAGE\(^D\) -33 TO -77 VOLTS
DC ION TRAP CURRENT STANDARD COIL #11 (APPROX.) 75 \pm 50% MA.
ION TRAP FIELD INTENSITY (APPROX.) 35 GAUSSES

\(^C\) WITH THE COMBINED GRID #1 BIAS VOLTAGE AND VIDEO-SIGNAL VOLTAGE ADJUSTED TO GIVE AN ANODE CURRENT OF 100 MICROAMPERES ON A 30 \(3/4\)" X 14 \(1/4\)" PICTURE SIZE.

\(^D\) VISUAL EXTINCTION OF UNDEFLACED FOCUSING SPOT.

CIRCUIT VALUES
MAXIMUM GRID #4 CIRCUIT RESISTANCE 1.5 MEGOHMS