CATHODE RAY

THE 17UP4 IS A DIRECT VIEW PICTURE TUBE DESIGNED FOR USE IN TELEVISION APPLICATIONS. ITS FEATURES INCLUDE:

- GREY FILTER FACEPLATE
- EXTERNAL CONDUCTIVE COATING
- MAGNETIC FOCUS AND DEFLECTION
- RECTANGULAR GLASS CONSTRUCTION
- UNIPOTENTIAL CATHODE
- CYLINDRICAL FACEPLATE
- 14 1/2" X 10 7/8" RASTER SIZE
- EXTERNAL SINGLE FIELD ION TRAP

ELECTRICAL DATA

FOCUSING METHOD
DEFLECTING METHOD
DEFLECTION ANGLE (APPROX.)
  HORIZONTAL
DIRECT INTERELECTRODE CAPACITANCES (APPROX.)
  CATHODE TO ALL OTHER ELECTRODES
  GRID #1 TO ALL OTHER ELECTRODES
  MAXIMUM EXTERNAL CONDUCTIVE COATING TO ANODE
  MINIMUM EXTERNAL CONDUCTIVE COATING TO ANODE

MAGNETIC
MAGNETIC
70 DEGREES
5 μF
6.5 μF
750 μF
500 μF

OPTICAL DATA

PHOSPHOR NUMBER
FLUORESCENT COLOR
PHOSPHORESCENT COLOR
PERSISTENCE
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.)

NO. 4
WHITE
WHITE
MEDIUM
70 PERCENT

MECHANICAL DATA

OVERALL LENGTH
GREATEST DIMENSIONS OF BULB
  DIAGONAL
  WIDTH
  HEIGHT
MINIMUM USEFUL SCREEN DIMENSIONS
  DIAGONAL
  WIDTH
  HEIGHT
BULB CONTACT
  BASE
  BIASING
BULB CONTACT ALIGNMENT
  J1-21 CONTACT ALIGNS WITH PIN POSITION #3 ± 10 DEGREES

19 3/16 ± 3/8 INCHES
16 5/8 ± 1/8 INCHES
15 3/8 ± 1/8 INCHES
12 1/4 ± 1/8 INCHES
15 13/16 INCHES
14 1/2 INCHES
10 7/8 INCHES
RECESSED SMALL CAVITY CAP
SMALL SHELL DUODECAL 5 PIN
12N

PIN CONNECTIONS

PIN 1 - HEATER
PIN 2 - GRID NO. 1
PIN 10 - GRID NO. 2
PIN 11 - CATHODE
PIN 12 - HEATER
ANODE CAP:
  GRID NO. 3

BOTTOM VIEW

CONTINUED ON FOLLOWING PAGE
RATINGS
DESIGN CENTER VALUES

HEATER VOLTAGE 6.3 VOLTS
HEATER CURRENT 0.6 AMP.
MAXIMUM DC ANODE, GRID #3 VOLTAGE 14000 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 A
   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

A THE CATHODE SHOULD BE RETURNED TO ONE SIDE OR TO THE MIDTAP OF THE HEATER TRANSFORMER WINDING.

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

DC ANODE, GRID #3 VOLTAGE 13000 VOLTS
DC GRID #2 VOLTAGE 250 VOLTS
DC GRID #1 VOLTAGE B -33 TO -77 VOLTS
DC FOCUSING COIL CURRENT C (APPROX.) 110 MA.
DC ION TRAP CURRENT STANDARD COIL #111 (APPROX.) 120 MA.

B VISUAL EXTINCTION OF UNELECTED FOCUSED SPOT.

C FOR STANDARD FOCUS COIL #109, OR EQUIVALENT, WITH THE COMBINED GRID #1 BIASES VOLTAGE AND VIDEO SIGNAL VOLTAGE ADJUSTED TO PRODUCE A HIGHLIGHT BRIGHTNESS OF 20 FOOT LAMBERTS ON A 7.2/2” BY 3/8” PICTURE SIZE. DISTANCE FROM REFERENCE LINE TO CENTER OF AIR GAP OR FOCUS COIL SHALL BE 3.25 INCHES.

CIRCUIT VALUES

MAXIMUM GRID #1 CIRCUIT RESISTANCE 1.5 MEGOHMS