CATHODE RAY

THE 17VP4 AND 17VP4B ARE DIRECT VIEW PICTURE TUBES DESIGNED FOR USE IN TELEVISION APPLICATIONS. THEY ARE IDENTICAL EXCEPT FOR THE ALUMINIZED SCREEN ON THE 17VP4B. THEIR COMMON FEATURES INCLUDE:

- MAGNETIC DEFLECTION
- UNIPOTENTIAL CATHODE
- EXTERNAL CONDUCTIVE COATING
- CYLINDRICAL FACEPLATE
- RECTANGULAR GLASS CONSTRUCTION
- NEUTRAL DENSITY FACEPLATE
- LOW VOLTAGE ELECTROSTATIC FOCUS
- EXTERNAL SINGLE FIELD ION TRAP

10 7/8" X 14 1/2" RASTER SIZE

ELECTRICAL DATA

FOCUSING METHOD
DEFLECTING METHOD
DEFLECTION ANGLE (APPROX.)
HORIZONTAL
DIAGONAL
DEGREES
66
70
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
µF
5
6
1,500
750

OPTICAL DATA

PHOSPHOR NUMBER
SULFIDE TYPE
NO. 4
WHITE
FLUORESCENT COLOR
WHITE
PHOSPHORESCENT COLOR
PERSISTENCE
SHORT
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.)
PERCENT
58 - 72

RATINGS

HEATER VOLTAGE
HEATER CURRENT
VOLTS
6.3
AMP.
0.6
MAXIMUM DC ANODE #2, GRID #3 VOLTAGE
(WITH PROTECTIVE FACE VIEWING WINDOW)
16,000
VOLTS
MAXIMUM ANODE #1 VOLTAGE RANGE FOR FOCUS
-64 TO +350
VOLTS
MAXIMUM DC GRID #2 VOLTAGE
500
VOLTS
MAXIMUM GRID #1 VOLTAGE
DC NEGATIVE-BIAS VALUE
125
VOLTS
DC POSITIVE-BIAS VALUE
0
VOLTS
POSITIVE-PEAK VALUE
2
VOLTS
MAXIMUM DC ANODE #1 VOLTAGE
-500 TO +1,000
VOLTS
MAXIMUM DC ANODE #1 CURRENT RANGE
-15 TO +25
µAMP.
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
180
VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE
180
VOLTS
MAXIMUM GRID #1 CIRCUIT RESISTANCE
1.5
MEGOMMS

With the combined grid #3 voltage and video-drive voltage adjusted, using an Indian Head Test Pattern with the blacks just black, to give an average beam current of 100 microamperes on a 10 3/4" by 14 3/4" picture area.

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

DC ANODE #2, GRID #3 VOLTAGE
DC ANODE #1 VOLTAGE (FOCUSING ELECTRODE)
-48 TO +260
VOLTS
DC GRID #2 VOLTAGE
300
VOLTS
DC GRID #1 VOLTAGE
-33 TO -77
VOLTS
DC ION TRAP CURRENT STANDARD COIL #11
75 ± 50%
MA.
ION TRAP FIELD INTENSITY (APPROX.)
35
GAUSSES

Visual extinction of undeflected focused spot.

Single field ion-trap adjusted to optimum position.

CONTINUED ON FOLLOWING PAGE
**MECHANICAL DATA**

- **OVERALL LENGTH**: 19 3/16 ± 3/8 INCHES
- **GREATES DIMENSIONS OF BULB**
  - **DIAGONAL**: 16 5/8 ± 1/8 INCHES
  - **WIDTH**: 15 3/8 ± 1/8 INCHES
  - **HEIGHT**: 12 9/32 ± 1/8 INCHES
- **MINIMUM USEFUL SCREEN DIMENSIONS**
  - **DIAGONAL**: 15 3/4 INCHES
  - **WIDTH**: 14 1/2 INCHES
  - **HEIGHT**: 10 7/8 INCHES
- **BULB CONTACT**: RECESSED SMALL CAVITY CAP
  - **BASE**: SMALL SHELL DUODECAL 6 PIN
  - **BASING**: J1-21
  - **BULB CONTACT ALIGNMENT**: J1-21 CONTACT aligns with PIN position #6 ± 30 DEGREES

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**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 NO. 3

**BOTTOM VIEW**