CATHODE RAY

THE 16TP4 IS A DIRECT-VIEW PICTURE TUBE DESIGNED FOR USE IN TELEVISION APPLICATIONS. ITS FEATURES INCLUDE:

UNIPOTENTIAL CATHODE
MAGNETIC FOCUS & DEFLECTION
EXTERNAL SINGLE FIELD FOR TRAP
13 1/2" x 10 3/8" MASTER SIZE

ELECTRICAL DATA

FOCUSING METHOD
DEFLECTING METHOD
DEFLECTION ANGLE (APPROX.):
   HORIZONTAL
   DIAGONAL
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
66 DEGREES
70 DEGREES
5 µµf
6 µµf
2000 µµf
750 µµf

OPTICAL DATA

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

NO. 4
WHITE
WHITE
SHORT
72 PERCENT

MECHANICAL DATA

OVERALL LENGTH
18 1/8 ± 3/8 INCHES
GREATEST DIMENSIONS OF BULB:
   DIAGONAL
   WIDTH
   HEIGHT
MINIMUM USEFUL SCREEN DIMENSIONS:
   DIAGONAL
   WIDTH
   HEIGHT
BULB CONTACT
RECESSED SMALL CAVITY CAP
BASE
SMALL SHELL DUODECAL 5 PIN
BASING
12N
BULB CONTACT ALIGNMENT
J1-21 CONTACT ALIGNS WITH PIN POSITION #6 ± 30 DEGREES

PIN CONNECTIONS

PIN 1 - HEATER
PIN 2 - GRID NO. 1
PIN 30 - GRID NO. 2
PIN 11 - CATHODE
PIN 12 - HEATER
ANODE CAP:
   GRID NO. 3

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:
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

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

DC ANODE, GRID #3 VOLTAGE 12000 VOLTS
DC GRID #2 VOLTAGE 300 VOLTS
DC GRID #1 VOLTAGE\(^{A}\) -33 TO -77 VOLTS
DC FOCUSING COIL CURRENT (APPROX.)\(^{B}\) 99 ± 20% MA.
DC ION TRAP CURRENT STANDARD COIL #111 (APPROX.) 75 ± 50% MA.

\(^{A}\) VISUAL EXTINCTION OF UNDEFLECTED 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 35 FOOT LAMBERTS ON A 10 1/8" BY 13 1/2" PICTURE SIZE. DISTANCE FROM REFERENCE LINE TO CENTER OF AIR GAP OR FOCUS COIL SHALL BE 3 INCHES.

CIRCUIT VALUES

MAXIMUM GRID #1 CIRCUIT RESISTANCE 1.5 MEGOHMS