CATHODE RAY

THE 17CP4 AND 17CP4A ARE DIRECT VIEW PICTURE TUBES DESIGNED FOR USE IN TELEVISION APPLICATIONS. THEY ARE IDENTICAL WITH THE FOLLOWING EXCEPTION:

17CP4 – FROSTED FACEPLATE
17CP4A – UNFROSTED FACEPLATE

THEIR COMMON FEATURES INCLUDE:

UNIPOTENTIAL CATHODE
14 5/8" X 11" RASTER SIZE
RECTANGULAR METAL CONSTRUCTION

ELECTRICAL DATA

FOCUSING METHOD MAGNETIC
DEFOCussNG METHOD MAGNETIC
DEFLECTION ANGLE (APPROX.)
HORIZONTAL 66 DEGREES
VERTICAL 50 DEGREES
DIAGONAL 70 DEGREES

DIRECT INTERELECTRODE CAPACITANCES (APPROX.)
CATHODE TO ALL OTHER ELECTRODES 5 μf
GRID #1 TO ALL OTHER ELECTRODES 6 μf

OPTICAL DATA

PHOSPHOR NUMBER SULFIDE TYPE NO. 4
FLUORESCENT COLOR WHITE
PHOSPHORESCENT COLOR WHITE
PERSISTENCE MEDIUM
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.) 65 PERCENT

MECHANICAL DATA

OVERALL LENGTH 19 INCHES
GREATEST DIMENSIONS OF BULB
DIAGONAL 16 13/16 + 3/16 INCHES
WIDTH 15 15/16 + 1/8 INCHES
HEIGHT 12 1/4 + 1/8 INCHES

MINIMUM USEFUL SCREEN DIMENSIONS
WIDTH 14 5/8 INCHES
HEIGHT 11 INCHES

BULB CONTACT METAL SHELL LIP
BASE SMALL SHELL DUODECAL 5 PIN 85-57
BASING 12D

BASE ALIGNMENT PIN #6 ALIGNS WITH HORIZONTAL PICTURE AXIS + 10 DEGREES

PIN CONNECTIONS

PIN 1 – HEATER
PIN 2 – GRID NO. 1
PIN 10 – GRID NO. 2
PIN 11 – CATHODE

PIN 12 – HEATER
METAL SHELL LIP:
ANODE

CONTINUED ON FOLLOWING PAGE
RATINGS
DESIGN CENTER VALUES

HEATER VOLTAGE 6.3 VOLTS
REATER CURRENT 0.6 AMP.
MAXIMUM DC ANODE VOLTAGE 16000 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
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

A. THE PRODUCT OF ANODE VOLTAGE AND AVERAGE ANODE CURRENT SHOULD BE LIMITED TO 6 WATTS.

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

DC ANODE VOLTAGE 12000 VOLTS
DC GRID #2 VOLTAGE 300 VOLTS
DC GRID #4 VOLTAGE -33 TO -77 VOLTS
DC FOCUSING COIL CURRENT (APPROX.) 96 ± 6 MA.
DC ION TRAP CURRENT STANDARD COIL #111 (APPROX.) 70 MA.
FIELD STRENGTH OF ION TRAP MAGNET 45 GAUSSES

B. BRILLIANCE AND DEFINITION DECREASE WITH DECREASING VOLTAGE. IN GENERAL, THE ANODE VOLTAGE SHOULD NOT BE LESS THAN 12,000 VOLTS.

C. VISUAL EXTINCTION OF UNDEFOCUSED FOCUSED SPOT.

D. FOR STANDARD FOCUS COIL #109, OR EQUIVALENT, WITH THE COMBINED GRID #2 BIAS VOLTAGE AND VIDEO SIGNAL VOLTAGE ADJUSTED TO PRODUCE A HIGHLIGHT BRIGHTNESS OF 30 FOOT LAWBERTS ON A 10 3/8" BY 14 3/8" PICTURE SIZE, DISTANCE FROM REFERENCE LINE TO CENTER OF AIR GAP ON FOCUS COIL SHALL BE 3.0 INCHES.

CIRCUIT VALUES

MAXIMUM GRID #4 CIRCUIT RESISTANCE 1.5 MEGOHMS