CATHODE RAY

THE 16YP4 IS A DIRECT-VIEW PICTURE TUBE DESIGNED FOR USE IN TELEVISION APPLICATIONS. ITS FEATURES INCLUDE:

UNIPOTENTIAL CATHODE
MAGNETIC FOCUS A DEFLECTION
EXTERNAL SINGLE FIELD ION TRAP

GREY FILTER FACEPLATE
ROUND GLASS CONSTRUCTION
EXTERNAL CONDUCTIVE COATING
10 1/4" X 14 1/2" RASTER SIZE

ELECTRICAL DATA

FOCUSING METHOD = MAGNETIC
DEFLECTING METHOD = MAGNETIC
DEFLECTION ANGLE (APPROX.) = 70 DEGREES

DIRECT INTERELECTRODE CAPACITANCES (APPROX.):
CATHODE TO ALL OTHER ELECTRODES = 5.0 µf
GRID #1 TO ALL OTHER ELECTRODES = 6.0 µf
MAXIMUM EXTERNAL CONDUCTIVE COATING TO ANODE = 2000 µf
MINIMUM EXTERNAL CONDUCTIVE COATING TO ANODE = 750 µf

OPTICAL DATA

PHOSPHOR NUMBER = NO. 4
FLUORESCENT COLOR = WHITE
PHOSPHORESCENT COLOR = WHITE
PERSISTENCE = MEDIUM
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.) = 70 PERCENT

MECHANICAL DATA

OVERALL LENGTH = 17 5/16 ± 3/8 INCHES
GREATEST DIAMETER OF BULB = 15 7/8 ± 1/8 INCHES
MINIMUM USEFUL SCREEN DIAMETER = 14 1/2 INCHES
BULB CONTACT = RECESSED SMALL CAVITY CAP
BASE = SMALL SHELL DUODECAL 5 PIN
BASEING = 85-57
BULB CONTACT ALIGNMENT = J1-21 CONTACT ALIGNS WITH PIN POSITION #3 ± 10 DEGREES

PIN CONNECTIONS

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

BOTTOM VIEW

CONTINUED ON FOLLOWING PAGE
RATINGS
DESIGN CENTER VALUES

HEATER VOLTAGE 6.3 VOLTS
HEATER CURRENT 0.6 AMP.
MAXIMUM DC ANODE 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 VOLTAGE 12000 VOLTS
DC GRID #2 VOLTAGE 300 VOLTS
DC GRID #1 VOLTAGE\(^A\) \(-33 \text{ to } -77\) VOLTS
DC FOCUSING COIL CURRENT\(^B\) (APPROX.) 100 MA.

\(^A\) VISUAL EXTINCTION OF UNDEFOCUSED FOCUSED SPOT.

\(^B\) FOR STANDARD FOCUS COIL #309, OR EQUIVALENT, WITH THE COMBINED GRID #1 BIAS VOLTAGE AND VIDEO SIGNAL VOLTAGE ADJUSTED TO PRODUCE A HIGHLIGHT BRIGHTNESS OF 30 FOOT LAMBERTS ON A 10 1/4" BY 14 1/2" PICTURE SIZE. DISTANCE FROM REFERENCE LINE TO CENTER OF AIR GAP ON FOCUS COIL SHALL BE 3.25 INCHES.

CIRCUIT VALUES

MAXIMUM GRID #1 CIRCUIT RESISTANCE 1.5 MEGOHMS