CATHODE RAY

THE 16HP4 AND 16HP4A ARE DIRECT-VIEW PICTURE TUBES DESIGNED FOR USE IN TELEVISION APPLICATIONS. THEY ARE IDENTICAL EXCEPT FOR THE GREY FILTER FACEPLATE USED ON THE 16HP4A. THEIR COMMON FEATURES INCLUDE:

- UNIPOTENTIAL CATHODE
- ROUND GLASS CONSTRUCTION
- MAGNETIC FOCUS & DEFLECTION
- EXTERNAL CONDUCTIVE COATING
- EXTERNAL DOUBLE FIELD ION TRAP
- 10 1/4" X 14 1/2" RASTER SIZE

ELECTRICAL DATA

FOCUSBNG METHOD MAGNETIC
DEFLECTING METHOD MAGNETIC
DEFLECTION ANGLE (APPROX.) 60 DEGREES
DIRECT INTERELECTRODE CAPACITANCES (APPROX.):
- MAXIMUM EXTERNAL CONDUCTIVE COATING TO ANODE 3500 µuf
- MINIMUM EXTERNAL CONDUCTIVE COATING TO ANODE 1500 µuf

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 21 1/4 ± 3/8 INCHES
- GREATEST DIAMETER OF BULB 15 7/8 ± 1/8 INCHES
- MINIMUM USEFUL SCREEN DIAMETER 14 1/2 INCHES
- BULB CONTACT RECESSSED SMALL CAVITY CAP J1-21
- BASE SMALL SHELL DUODECAL 5 PIN BS-57
- BANDING 12N
- 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

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RATINGS
DESIGN CENTER VALUES

HEATER VOLTAGE 6.3 VOLTS
HEATER CURRENT 0.6 AMP.
MAXIMUM DC ANODE VOLTAGE 14 000 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 125 VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE 125 VOLTS

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

DC ANODE VOLTAGE 12 000 VOLTS
DC GRID #2 VOLTAGE 300 VOLTS
DC GRID #1 VOLTAGE A -33 TO -77 VOLTS
DC FOCUSING COIL CURRENT (APPROX.) B 110 MA.
DC ION TRAP CURRENT STANDARD COIL #108 (APPROX.) 120 MA.

A VISUAL EXTINCTION OF UNEFFECTED FOCUSED SPOT.
B FOR STANDARD FOCUS COIL #109, OR EQUIVALENT, WITH THE COMBINED GRID #2 BIAS VOLTAGE AND VACUUM SIGNAL VOLTAGE ADJUSTED TO PRODUCE A HIGHLIGHT BRIGHTNESS OF 20 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