CATHODE RAY TUBE

19 INCH, RECTANGULAR, GLASS

FOCUS -- ELECTROSTATIC
DEFLECTION -- MAGNETIC
114 DEGREE DEFLECTION ANGLE

FACE PLATE -- SPHERICAL GRAY
NON ION TRAP GUN
ALUMINIZED SCREEN
EXTERNAL CONDUCTIVE COATING

The 19DVP4 is a 19-inch - 114° hw rectangular aluminized picture tube with the anode bulb contact J1-21 located on the long side of the bulb. It features a short neck, 6.3 V, 450 ma heater and 150 volt G-2 for cathode drive design.

ELECTRICAL DATA

Focusing Method ........ Electrostatic
Deflection Angle, Approximate
  Horizontal ........... 102 degrees
  Vertical ............. 87 degrees
  Diagonal .............. 114 degrees
Direct Interelectrode Capacitance
  Cathode to all other electrodes, approximate .. .5 uuf
  Grid #1 to all other electrodes, approximate .. .6 uuf
  External Conductive Coating to Anode ....... 1500 max. uuf
  1000 min. uuf
Heater Current at 6.3 volts .............. 450 - 23 ma.
Heater Warm Up Time ............... 11 sec.

OPTICAL DATA

Phosphor Number .......... P4 Aluminized
Light Transmittance at Center Approx. .... 78 percent

from JEDEC release #4667, April 13, 1964
MECHANICAL DATA

Overall Length .................................................. 11 3/4 ± 1/4 inches
Greatest Dimensions of Tube
  Diagonal ......................................................... 18 5/8 ± 1/8 inches
  Width ............................................................. 16 13/32 ± 1/8 inches
  Height ............................................................. 13 11/32 ± 1/8 inches
Minimum Useful Screen Dimensions (Projected)
  Diagonal ......................................................... 17 9/16 inches
  Horizontal Axis ................................................. 15 1/8 inches
  Vertical Axis .................................................. 12 inches
  Area ............................................................... 172 sq. inches
Neck Length ...................................................... 4 1/2 ± 1/8 inches
Bulb ................................................................. J149A1A
Bulb Contact ..................................................... JETEC No. J1-21
Base ................................................................. JETEC No. B7-237 or B7-208
Basing ............................................................. 8HR
Bulb Contact Alignment
  Anode Contact Aligns with Pin No. 4 ± 30 degrees

RATINGS (Design Maximum System)

Unless otherwise specified, voltage values are positive and measured with respect to cathode.

Maximum Anode Voltage ........................................... 20,000 volts
Minimum Anode Voltage ........................................... 13,000 volts
Maximum Grid 4 (Focusing Electrode) Voltage .................. -500 to +1000 volts
Minimum Grid 2 Voltage ........................................... 100 volts
Maximum Grid 2 Voltage .......................................... 250 volts
Grid 1 Voltage
  Maximum Negative Value ...................................... 140 volts DC
  Maximum Negative Peak Value ................................ 200 volts
  Maximum Positive Value ....................................... 0 volts DC
  Maximum Positive Peak Value ................................ 2 volts
Maximum Heater Voltage ....................................... 6.9 volts
Minimum Heater Voltage ........................................ 5.7 volts
Maximum Heater-Cathode Voltage
  Heater negative with respect to cathode
  During warm-up period not to exceed 15 sec. ............... 410 volts
  After equipment warm-up period ............................. 180 volts
  Heater positive with respect to cathode .................... 180 volts

TYPICAL OPERATING CONDITIONS (Cathode Drive Service)

Anode Voltage .................................................... 16,000 volts DC
Grid #4 Voltage (Focusing Electrode, Note 2) ............... -250 to +150 volts DC
Grid #2 Voltage ................................................ 150 volts DC
Cathode to Grid #1 Voltage (Note 1) .......................... 36 to 54 volts DC
MAXIMUM CIRCUIT VALUES

Maximum Grid #1 Circuit Resistance . . . . . . 1.5 max. megohm
Grid #2 Circuit Resistance . . . . . . . . . . 0.1 min. megohm
Focusing Electrode Circuit Resistance . . . . . 0.1 min. megohm

Protective resistance in Grid No. 2 and focusing electrical circuits is advisable to prevent damage to tube. If applicable, one resistor common to both circuits may be used.

NOTES:

1. Visual extinction of focused raster.

2. With the combined Grid #1 bias voltage and video-signal voltage adjusted to give an anode current of 150 microamperes on a 15 1/8 x 11 15/16" pattern from RCA 2F21 monoscope or equivalent.
OUTLINE NOTES

1. The reference line is determined by the intersection of the plane C-C of gage (EIA No. 126) with the glass funnel.

2. Deflection angle on the diagonal is 114 degrees.

3. Anode terminal aligns with pin no. 4 ±30 degrees.

4. Use a non-rigidly mounted socket with flexible leads. Bottom circumference of base wafer will fall within 1-3/4 inch diameter circle concentric with the bulb axis.