The 19DCP4 is a 19"-1140 banded picture tube with a 4 3/8" neck length. This tube has an electrostatic focus, magnetic deflection, and a metal backed screen with a straight gun, which requires no ion trap and a 600 milliamper, 6.3 volt filament.

**ELECTRICAL DATA**

**Focusing Method**

**Deflection Angles, Approximate**
- Horizontal: 102 Degrees
- Vertical: 85 Degrees
- Diagonal: 114 Degrees

**Direct Interelectrode Capacitances**
- 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, 600 ± 30 ma, 11 Seconds

**Heater Current at 6.3 volts**
- Heater Warm-up Time: P4 Aluminized

**OPTICAL DATA**

- Phosphor Number JEDEC designation: 49%

**MECHANICAL DATA**

- Overall Length: 11 5/8 ± 1/4 Inches
- Greatest Diameter of Tube: 18 7/8 max. Inches
- Greatest Dimensions of Tube:
  - Diagonal: 16 11/16 max. Inches
  - Height: 13 39/64 max. Inches
- Minimum Useful Screen Diameter (Projected): 17 9/16 Inches
- Minimum Useful Screen Dimensions (Projected):
  - Diagonal: 15 1/8 Inches
  - Horizontal Axis: 12 Inches
  - Vertical Axis: 172 Sq. Inches
  - Area: 4 3/8 ± 1/8 Inches
- Neck Length: J=149=F1
- Bulb EIA designation or equivalent (Including shield designation):
  - Base: J1-21
  - Basing: B7-208
  - JEDEC Designation: 8HR

from JEDEC release #4318, June 24, 1963
MECHANICAL DATA (Cont'd)

Bulb Contact Alignment
J1-21 contact aligns with pin position #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 12,000 Volts

Maximum Grid #4 (Focusing Electrode) Voltage +1000 -500
Maximum Grid #2 Voltage 550 Volts
Minimum Grid #2 Voltage 200 Volts

Grid #1 Voltage
Maximum Negative Value 154 Volts DC
Maximum Negative Peak Value 220 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 seconds 450 Volts
After equipment warm-up period 200 Volts
Heater positive with respect to cathode 200 Volts

TYPICAL OPERATING CONDITIONS
GRID DRIVE SERVICE

Unless otherwise specified all voltage values are positive with respect to cathode.

Anode Voltage 16,000 Volts DC
Grid #4 Voltage (Focusing Electrode) 0 to +400 Volts DC
(Notes 2 & 3) 400 Volts DC
Grid #2 Voltage -39 to -94 Volts DC
Grid #1 Voltage (Note 1)

MAXIMUM CIRCUIT VALUES

Maximum Grid #1 Circuit Resistance 1.5 Megohms

GRAPHS AND DRAWINGS

Tube Outline with essential dimensions and tolerances.

Pin Connections:

Pin 1 - Heater
Pin 2 - Grid No. 1
Pin 3 - Grid No. 2
Pin 4 - Grid No. 4
Pin 5 - Grid No. 1
Pin 7 - Cathode
Pin 8 - Heater

Page 2
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 100 microamperes on a 15 1/8" x 12" pattern from RCA 2F21 Monoscope or equivalent.

3. Individual tubes will have satisfactory focus at some value between 0 and +400 volts.

NOTES FOR DIMENSIONAL OUTLINE

1. The plane through the tube axis and pin No. 4 may vary from the plane through the tube axis and ultor terminal by angular tolerance (measured about the tube axis) of ±30°. Ultor terminal is on same side as Pin No. 4.

2. With tube neck inserted through flared end of reference-line gauge JEDEC No. G-126 and with tube seated in gauge, the reference line is determined by the intersection of the Plane CC' of the gauge with the glass funnel.

3. Socket for this base should not be rigidly mounted; it should have flexible leads and be allowed to move freely. The design of the socket should be such that the circuit wiring cannot impress lateral strains through the socket contacts on the base pins. Bottom circumference of base wafer will fall within a circle concentric with bulb axis and having a diameter of 1 3/4".

4. External conductive coating must be grounded.

5. To clean this area, wipe only with soft dry lint-less cloth.

6. Measured to include rim band and tension strap.