

ELECTRONIC TUBE REFERENCE

# 21FP4D

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION  
CONSTRUCTION  
CATHODERAY

Twenty-one-inch direct-view monochrome television picture tube with magnetic deflection and high-voltage operation. Manufacturer documentation describes its focusing system, picture-screen construction, and receiver-display characteristics for large-screen television service.

## GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | 12L               | BASE PINS            | —             |
| NOMINAL HEATER      | 6.3 V / 600 mA    | PARALLEL HEATER      | — / —         |
| HEATING             | Indirect          | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

## SECTION RATINGS

|                                                                                                                                                                                                               |         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| SECTION1 Cathode Ray                                                                                                                                                                                          |         |
| MAXIMUM PLATE VOLTAGE                                                                                                                                                                                         | 20000 V |
| CRT maximum accelerating/anode/ultor voltage is promoted to MaxPlateVoltage; additional electrode ratings, capacitances, operating conditions, focus/deflection and optical data are preserved as parameters. |         |

21FP4D is a picture tube using electrostatic focusing and magnetic deflection. The source specifies a P4 screen and publishes CRT accelerating/anode ratings, control and focusing-electrode limits, heater-cathode limits, capacitances, and operating or deflection characteristics.



## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1971 RCA HB3 Binder 1 of 7

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1971 RCA HB3 BINDER 1 OF 7

## Section 1 · Cathode Ray

| CHARACTERISTIC               |                 |                  |
|------------------------------|-----------------|------------------|
| PARAMETER                    | PUBLISHED VALUE | CONDITION / NOTE |
| Heater current               | 60 mA           | At6.3V           |
| Faceplate light transmission | 74 %            | Approximate      |

| CAPACITANCE                                      |                 |                  |
|--------------------------------------------------|-----------------|------------------|
| PARAMETER                                        | PUBLISHED VALUE | CONDITION / NOTE |
| Grid 1 to all other electrodes                   | 6 pF            | —                |
| Cathode to all other electrodes                  | 5 pF            | —                |
| External conductive coating to anode capacitance | —750 pF         | —                |

| OTHER                                |                     |                         |
|--------------------------------------|---------------------|-------------------------|
| PARAMETER                            | PUBLISHED VALUE     | CONDITION / NOTE        |
| Maximum grid 2 voltage               | 550 V               | —                       |
| Maximum grid 1 negative-bias voltage | 155 V               | NegativeBias            |
| Maximum grid 1 positive-peak voltage | 2 V                 | PositivePeak            |
| Maximum grid 1 negative-peak voltage | 220 V               | NegativePeak            |
| Peak heater-cathode voltage          | 200 V               | HeaterNegativeOperating |
| Projected screen area                | 248 in <sup>2</sup> | —                       |
| Typical anode/ultor voltage          | 14000 V             | —                       |

An independent reference for electronic tubes, vacuum tubes,  
and their source documents.

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