

Large aluminized P4 monochrome television picture tube for high-voltage direct-view service, using electrostatic focusing and magnetic deflection with manufacturer-specified operating characteristics for type 23HUP4A.

GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | —                 | BASE PINS            | 7             |
| NOMINAL HEATER      | 6.9 V / 20 A      | PARALLEL HEATER      | — / —         |
| HEATING             | Indirect          | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

SECTION RATINGS

|                                                                                                                                                  |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| SECTION1 Cathode Ray                                                                                                                             |     |
| MAXIMUM SCREEN VOLTAGE                                                                                                                           | 0 V |
| CRT-specific ratings, operating conditions, capacitances, focus/deflection, cutoff, optical, and screen data are retained in section parameters. |     |

Direct-view cathode-ray picture tube for television display service, using electrostatic focus and magnetic deflection. The supplied datasheet was used for heater data, electrode ratings, focus and deflection information, capacitances, optical data, screen characteristics, and applicable operating limits.

**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

| CHARACTERISTICS                                          |                 |                                                                                                                      |
|----------------------------------------------------------|-----------------|----------------------------------------------------------------------------------------------------------------------|
| PARAMETER                                                | PUBLISHED VALUE | CONDITION / NOTE                                                                                                     |
| PAN-0-PLY TYPE                                           | 0 V             | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| External conductive coating to anode – published value 1 | 1700 mA         | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| External conductive coating to anode – published value 2 | 2500 mA         | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Heater Current at 6.3 volts – published value 1          | 6.3 V           | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Heater Current at 6.3 volts – published value 2          | 450 V           | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Heater Current at 6.3 volts – published value 3          | 20 V            | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Light transrlss oc a~ center (approx )                   | 42              | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Projected Area of Screen                                 | 282             | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| are positive with respect to grid No,1                   | 1               | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Anode Voltage – published value 1                        | 12000 V         | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
|                                                          |                 |                                                                                                                      |

| PARAMETER                             | PUBLISHED VALUE | CONDITION / NOTE                                                                                                     |
|---------------------------------------|-----------------|----------------------------------------------------------------------------------------------------------------------|
| Anode Voltage – published value 2     | <b>23500 V</b>  | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Grid-No.2 Voltage – published value 1 | <b>20 V</b>     | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Grid-No.2 Voltage – published value 2 | <b>60 V</b>     | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Heater Voltage – published value 1    | <b>5.7 V</b>    | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Heater Voltage – published value 2    | <b>6.9 V</b>    | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Combined AC and DC voltage            | <b>200 V</b>    | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Grid-No.4 Voltage <sup>b</sup>        | <b>200 V</b>    | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Grid-No.2 Voltage                     | <b>30 V</b>     | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Cathode Voltage – published value 1   | <b>22 V</b>     | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Cathode Voltage – published value 2   | <b>45 V</b>     | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Grid-No.1-Circuit Resistance          | <b>1.5 mA</b>   | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |

## TUBE TINKER

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

[Catalog](#)   [Tube types](#)   [Full books](#)   [Blog](#)   [Feedback & corrections](#)

© 2026 Tube Tinker