

Large P4 monochrome television picture tube designed for high-voltage direct-view service, using manufacturer-specified focusing, magnetic deflection, and beam-control arrangements for type 23JP4.

GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | 7FA               | BASE PINS            | 1             |
| NOMINAL HEATER      | 6.3 V / 25 A      | PARALLEL HEATER      | – / –         |
| HEATING             | Indirect          | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

SECTION RATINGS

|                                                                                                                                                  |         |
|--------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| SECTION1 Cathode Ray                                                                                                                             |         |
| MAXIMUM PLATE VOLTAGE                                                                                                                            | 22000 V |
| MAXIMUM SCREEN VOLTAGE                                                                                                                           | 50 V    |
| CRT-specific ratings, operating conditions, capacitances, focus/deflection, cutoff, optical, and screen data are retained in section parameters. |         |

23-inch direct-view monochrome television CRT with electrostatic focus, magnetic deflection, aluminized P4 screen, and gray/filter faceplate construction.



## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1950 Sylvania

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

1950 SYLVANIA

## Section 1 · Cathode Ray

| CHARACTERISTIC |                 |                  |
|----------------|-----------------|------------------|
| PARAMETER      | PUBLISHED VALUE | CONDITION / NOTE |
| Heater Voltage | 6.3 V           | —                |
| Heater Current | 450 mA          | —                |

| OTHER                 |                 |                  |
|-----------------------|-----------------|------------------|
| PARAMETER             | PUBLISHED VALUE | CONDITION / NOTE |
| Maximum Anode Voltage | 22000 V         | —                |
| Grid2 Voltage         | 70 V            | —                |



## SOURCE OPERATING CONDITIONS

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# 1965 Sylvania Electronic Tubes Vol3

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

1965 SYLVANIA ELECTRONIC TUBES VOL3

## Section 1 · Cathode Ray

| CHARACTERISTICS             |                 |                  |
|-----------------------------|-----------------|------------------|
| PARAMETER                   | PUBLISHED VALUE | CONDITION / NOTE |
| Focusing method             | Electrostatic   | —                |
| Deflection method           | Magnetic        | —                |
| Horizontal deflection angle | 100 deg         | —                |
| Diagonal deflection angle   | 114 deg         | —                |
| Vertical deflection angle   | 83 deg          | —                |
| Fluorescence                | White           | —                |
| Persistence                 | Short to medium | —                |
| Heater voltage              | 6.3 V           | —                |
| Heater current              | 450 mA          | —                |

| CONSTRUCTION |                 |                  |
|--------------|-----------------|------------------|
| PARAMETER    | PUBLISHED VALUE | CONDITION / NOTE |
| Phosphor     | Aluminized P4   | —                |

| OTHER                 |                 |                  |
|-----------------------|-----------------|------------------|
| PARAMETER             | PUBLISHED VALUE | CONDITION / NOTE |
| Maximum anode voltage | 22000 V         | —                |
|                       |                 |                  |

| PARAMETER                               | PUBLISHED VALUE                                                                                            | CONDITION / NOTE |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------|------------------|
| Typical anode voltage                   | 16000 V                                                                                                    | —                |
| Typical focus-electrode voltage maximum | 250 V                                                                                                      | —                |
| Typical grid2 voltage                   | 50 V                                                                                                       | —                |
| Cutoff voltage range                    | +35 to +50 V                                                                                               | —                |
| Grid1 circuit resistance maximum        | 1.5 Mohm                                                                                                   | —                |
| Anode voltage minimum                   | 15000 V                                                                                                    | —                |
| Heater voltage minimum                  | 5.8 V                                                                                                      | —                |
| Heater voltage maximum                  | 7 V                                                                                                        | —                |
| Focus-electrode voltage minimum         | -550 V                                                                                                     | —                |
| Focus-electrode voltage maximum         | 1100 V                                                                                                     | —                |
| Grid2 voltage maximum                   | 70 V                                                                                                       | —                |
| X-radiation precaution                  | Operate within published maximum anode-voltage rating; source carries X-radiation warning at elevated EHT. |                  |

| CAPACITANCE                                              |                 |                  |
|----------------------------------------------------------|-----------------|------------------|
| PARAMETER                                                | PUBLISHED VALUE | CONDITION / NOTE |
| Grid1-to-all capacitance                                 | 6 pF            | —                |
| External conductive coating to anode capacitance maximum | 2500 pF         | —                |

| APPLICATION |                                       |                  |
|-------------|---------------------------------------|------------------|
| PARAMETER   | PUBLISHED VALUE                       | CONDITION / NOTE |
| Application | Monochrome television picture display | —                |



SOURCE DATA APPENDIX

# 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                                                                                                     |
| LOW-VOLTAGE ELECTROSTATIC FOCUS                 | 10 V            | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Grid No.1 to all other electrodes               | 6 pF            | 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 | 25 V            | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Light transmission (Approx )                    | 40              | 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. |
| Anode Voltage                                   | 16000 V         | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Grid-No.4 Voltage – published value 1           | 0 V             | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Grid-No.4 Voltage – published value 2           | 500 V           | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Grid-No.2 Voltage                               | 50 V            | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| focused raster – published value 1              | 35 V            | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| focused raster – published value 2              | 50 V            | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| OTHER                                           |                 |                                                                                                                      |
| PARAMETER                                       | PUBLISHED VALUE | CONDITION / NOTE                                                                                                     |
| ANODE VOLTAGE                                   | 22000 V         | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Combined AC and DC voltage                      | 200 V           | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |
| Grid-No.1-Circuit Resistance                    | 1.5 mA          | Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions. |

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