

ELECTRONIC TUBE REFERENCE

SC4022

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION  
CONSTRUCTION  
CATHODERAY

Sylvania high-voltage electrostatic cathode-ray instrument tube with multiple deflection plates and anode ratings to 15 kV, intended for precision waveform and measurement display.

GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | B12-37            | BASE PINS            | 12            |
| 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                                                                              | 15000 V |
| Ratings and characteristics promoted from the supplied Sylvania source where explicitly published. |         |

Ten-inch direct-view oscilloscope CRT with electrostatic focus/deflection, post-deflection acceleration, aluminized P31 screen, and gray-filter faceplate.



## 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 |
| HeaterOrFilamentVoltage | 6.3 V           | —                |
| HeaterOrFilamentCurrent | 600 mA          | —                |



## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 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

| OTHER                            |                 |                  |
|----------------------------------|-----------------|------------------|
| PARAMETER                        | PUBLISHED VALUE | CONDITION / NOTE |
| Heater voltage                   | 6.3 V           | —                |
| Heater current                   | 540 mA–660 mA   | —                |
| Anode input maximum              | 6 W             | —                |
| Anode No. 3 voltage maximum      | 15000 V         | —                |
| Anode No. 2 voltage maximum      | 10000 V         | —                |
| Anode No. 1 voltage maximum      | 3500 V          | —                |
| Grid No. 1 negative bias maximum | -200 V          | —                |
| Grid No. 1 positive bias maximum | 0 V             | —                |
|                                  |                 |                  |

| PARAMETER                                            | PUBLISHED VALUE | CONDITION / NOTE |
|------------------------------------------------------|-----------------|------------------|
| Grid No. 1 positive peak maximum                     | 2 V             | —                |
| Peak heater-cathode voltage maximum                  | 180 V           | —                |
| Peak Anode No. 2 to deflecting-plate voltage maximum | 1500 V          | —                |
| Anode No. 3 voltage                                  | 12000 V         | —                |
| Anode No. 2 voltage                                  | 8000 V          | —                |
| Astigmatism correction voltage                       | 0–200 V         | —                |
| Anode No. 1 focus voltage                            | 2000–2400 V     | —                |
| Grid No. 1 cutoff voltage                            | -100--70 V      | —                |

| CAPACITANCE                                            |                 |                  |
|--------------------------------------------------------|-----------------|------------------|
| PARAMETER                                              | PUBLISHED VALUE | CONDITION / NOTE |
| Cathode to all other electrodes capacitance            | 7 pF            | —                |
| Grid No. 1 to all other electrodes capacitance         | 8.5 pF          | —                |
| Between deflecting plates 1-2 capacitance              | 4 pF            | —                |
| Between deflecting plates 3-4 capacitance              | 3.5 pF          | —                |
| Deflecting plate 1 to all other electrodes capacitance | 13 pF           | —                |
| Deflecting plate 2 to all other electrodes capacitance | 13 pF           | —                |
| Deflecting plate 3 to all other electrodes capacitance | 8.5 pF          | —                |
| Deflecting plate 4 to all other electrodes capacitance | 8.5 pF          | —                |

| CHARACTERISTIC               |                 |                  |
|------------------------------|-----------------|------------------|
| PARAMETER                    | PUBLISHED VALUE | CONDITION / NOTE |
| Deflection factor plates 1-2 | 200–245 V/in    | —                |
| Deflection factor plates 3-4 | 180–210 V/in    | —                |
| Modulation maximum           | 27 V            | —                |

| CIRCUITVALUE                                |                 |                  |
|---------------------------------------------|-----------------|------------------|
| PARAMETER                                   | PUBLISHED VALUE | CONDITION / NOTE |
| Grid No. 1 circuit resistance maximum       | 2 Mohm          | —                |
| Deflection-plate circuit resistance maximum | 1 Mohm          | —                |

## TUBE TINKER

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

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