



## ELECTRONIC TUBE REFERENCE

81

Rectifier - Half Wave electronic tube

CONSOLIDATED TECHNICAL DATA

**1 SECTION**  
CONSTRUCTION  
**RECTIFIER**

Directly heated single-diode high-voltage rectifier intended for use in pairs in full-wave supplies. Its 7.5 V filament and moderate current capability suit conventional high-voltage DC systems.

## GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | 4B                | BASE PINS            | 4             |
| NOMINAL HEATER      | 7.5 V / 1.25 A    | PARALLEL HEATER      | – / –         |
| HEATING             | Direct            | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

## SECTION RATINGS

|                                                                                                                   |        |
|-------------------------------------------------------------------------------------------------------------------|--------|
| <b>SECTION 1</b> Rectifier                                                                                        |        |
| MAXIMUM PLATE VOLTAGE                                                                                             | 700 V  |
| PEAK INVERSE VOLTAGE                                                                                              | 2000 V |
| NOMINAL OUTPUT CURRENT                                                                                            | 85 mA  |
| PEAK FORWARD CURRENT                                                                                              | 500 mA |
| FORWARD VOLTAGE DROP                                                                                              | 91 V   |
| <i>Published promoted fields populated by semantic section ownership; identical repeated sections compressed.</i> |        |

Directly heated single-diode high-voltage rectifier intended for use in pairs. The supplied Emission Labs sheet was read for filament data, maximum ratings, representative operating points, gm/rp/mu, output conditions, capacitances, and rectifier filter conditions as applicable.



## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1937 Raytheon Radio Receiving Tubes

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

## 1937 RAYTHEON RADIO RECEIVING TUBES

## Section 1 · Rectifier

| OTHER                            |                 |                   |
|----------------------------------|-----------------|-------------------|
| PARAMETER                        | PUBLISHED VALUE | CONDITION / NOTE  |
| RMS AC plate voltage maximum     | 700 V           | HalfWave          |
| DC output current maximum        | 85 mA           | HalfWave          |
| RMS AC voltage per plate maximum | 700 V           | FullWave;TwoTubes |
| DC output current maximum        | 170 mA          | FullWave;TwoTubes |

| CHARACTERISTIC            |                 |                    |
|---------------------------|-----------------|--------------------|
| PARAMETER                 | PUBLISHED VALUE | CONDITION / NOTE   |
| Average tube voltage drop | 91 V            | At170mADC;TwoTubes |



## SOURCE OPERATING CONDITIONS

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# 193X Cunningham

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

## 193X CUNNINGHAM

## Section 1 · Rectifier

| CHARACTERISTICS         |                 |                   |
|-------------------------|-----------------|-------------------|
| PARAMETER               | PUBLISHED VALUE | CONDITION / NOTE  |
| Heater/filament voltage | 7.5 V           | Published nominal |
| Heater/filament current | 1.25 A          | Published nominal |



## SOURCE OPERATING CONDITIONS

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# 1940 RCA

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

1940 RCA

## Section 1 · Rectifier

## OTHER

| PARAMETER        | PUBLISHED VALUE | CONDITION / NOTE |
|------------------|-----------------|------------------|
| AC Input Voltage | 700 V RMS       | HalfWave         |



## SOURCE OPERATING CONDITIONS

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# 195X General Electric Essential Characteristics

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

195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

## Section 1 · Rectifier

## OTHER

| PARAMETER                  | PUBLISHED VALUE | CONDITION / NOTE      |
|----------------------------|-----------------|-----------------------|
| Maximum RMS supply voltage | 700 V           | Half-Wave High-Vacuum |

## CHARACTERISTIC

| PARAMETER                 | PUBLISHED VALUE | CONDITION / NOTE      |
|---------------------------|-----------------|-----------------------|
| Forward voltage drop      | 91 V            | Half-Wave High-Vacuum |
| Voltage-drop test current | 170 mA          | Half-Wave             |



# 1961 Tung Sol

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

## 1961 TUNG SOL

### Section 1 · Rectifier

| OTHER             |                 |                   |
|-------------------|-----------------|-------------------|
| PARAMETER         | PUBLISHED VALUE | CONDITION / NOTE  |
| ACPlateVoltageRMS | 700 V           | HalfWave          |
| DC Output Current | 85 mA           | HalfWave          |
| DC Output Current | 170 mA          | FullWave;TwoTubes |



SOURCE DATA APPENDIX

# 2026 Emission Labs

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

## 2026 EMISSION LABS

### Section 1 · Rectifier

| CHARACTERISTICS  |                 |                  |
|------------------|-----------------|------------------|
| PARAMETER        | PUBLISHED VALUE | CONDITION / NOTE |
| Filament voltage | 7.5 V           | —                |
| Filament current | 1.25 A          | —                |

| OTHER                          |                 |                   |
|--------------------------------|-----------------|-------------------|
| PARAMETER                      | PUBLISHED VALUE | CONDITION / NOTE  |
| Pair maximum AC input voltage  | 700 V RMS       | TwoTubes;FullWave |
| Pair maximum DC output current | 170 mA          | TwoTubes;FullWave |
| Maximum first capacitor        | 4 uF            | TwoTubes;FullWave |