



## ELECTRONIC TUBE REFERENCE

## 2X2A

Rectifier - Half Wave electronic tube

CONSOLIDATED TECHNICAL DATA

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

Rugged high-vacuum half-wave rectifier for high-voltage equipment exposed to shock and vibration, providing approximately 25 kV peak inverse-voltage capability at low current.

## GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | 4AB               | BASE PINS            | 4             |
| NOMINAL HEATER      | 2.5 V / 1.75 A    | PARALLEL HEATER      | – / –         |
| HEATING             | Indirect          | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

## SECTION RATINGS

|                                    |         |
|------------------------------------|---------|
| <b>SECTION 1</b> Rectifier         |         |
| PEAK INVERSE VOLTAGE               | 25000 V |
| NOMINAL OUTPUT CURRENT             | 7.5 mA  |
| PEAK FORWARD CURRENT               | 60 mA   |
| <i>Half-wave vacuum rectifier.</i> |         |

The 2X2A is an indirectly heated high-vacuum half-wave rectifier for high-voltage applications where shock and vibration are encountered. Published ratings include 25 kV peak inverse voltage and 7.5 mA maximum rectified current.



## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 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 |
| DC output current maximum    | 7.5 mA          | HalfWave         |
| Peak inverse voltage maximum | 12500 V         | HalfWave         |
| RMS supply voltage maximum   | 5500 V          | HalfWave         |
| Peak current maximum         | 60 mA           | HalfWave         |



## SOURCE OPERATING CONDITIONS

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# 195X Raytheon Special Purpose Tubes

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

## 195X RAYTHEON SPECIAL PURPOSE TUBES

## Section 1 · Rectifier

| OTHER                        |                 |                  |
|------------------------------|-----------------|------------------|
| PARAMETER                    | PUBLISHED VALUE | CONDITION / NOTE |
| Maximum Peak Inverse Voltage | 12500 V         | —                |
| Maximum Peak Plate Current   | 60 mA           | —                |
| Maximum DC Output Current    | 7.5 mA          | —                |



# 1963 Ferranti

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

1963 FERRANTI  
Section 1 · Rectifier

| APPLICATION |                                  |                  |
|-------------|----------------------------------|------------------|
| PARAMETER   | PUBLISHED VALUE                  | CONDITION / NOTE |
| Application | High-voltage half-wave rectifier | —                |

| OTHER                                    |                 |                      |
|------------------------------------------|-----------------|----------------------|
| PARAMETER                                | PUBLISHED VALUE | CONDITION / NOTE     |
| Peak inverse voltage maximum             | 25000 V         | —                    |
| Peak anode current maximum               | 60 mA           | —                    |
| Rectified current maximum                | 7.5 mA          | —                    |
| Hot-switching transient current maximum  | 100 mA          | Pulse                |
| Maximum ambient temperature              | 70 C            | —                    |
| RMS input voltage                        | 5500 V          | CapacitorInputFilter |
| Minimum supply impedance                 | 300000 ohm      | CapacitorInputFilter |
| Filter input capacitance                 | 0.1 uF          | CapacitorInputFilter |
| Rectified current                        | 2 mA            | CapacitorInputFilter |
| DC output voltage                        | 4500 V          | CapacitorInputFilter |
| Hot-switching transient duration maximum | 200 ms          | Pulse                |



SOURCE DATA APPENDIX

# 1971 RCA HB3 Binder 6 of 7

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

Section 1 · Rectifier

| OTHER                   |                 |                  |
|-------------------------|-----------------|------------------|
| PARAMETER               | PUBLISHED VALUE | CONDITION / NOTE |
| Heater/filament voltage | 2.5 V           | —                |
| Heater/filament current | 1.75 A          | —                |
| Peak inverse voltage    | 10000 V         | —                |
| Peak plate current      | 75 mA           | —                |
| Average plate current   | 7.5 mA          | —                |

| APPLICATION |                                  |                  |
|-------------|----------------------------------|------------------|
| PARAMETER   | PUBLISHED VALUE                  | CONDITION / NOTE |
| Application | High-voltage half-wave rectifier | —                |