



## ELECTRONIC TUBE REFERENCE

## 575A

Rectifier - Half Wave electronic tube

CONSOLIDATED TECHNICAL DATA

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

Convection-cooled mercury-vapor half-wave rectifier for high-voltage power conversion. Its heavy filament and low mercury-arc drop provide ampere-class industrial rectification.

## GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | —                 | BASE PINS            | —             |
| NOMINAL HEATER      | 5 V / 11.5 A      | PARALLEL HEATER      | — / —         |
| HEATING             | Direct            | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

## SECTION RATINGS

|                                                                                                                |         |
|----------------------------------------------------------------------------------------------------------------|---------|
| <b>SECTION 1</b> Rectifier                                                                                     |         |
| PEAK INVERSE VOLTAGE                                                                                           | 15000 V |
| NOMINAL OUTPUT CURRENT                                                                                         | 2.5 A   |
| PEAK FORWARD CURRENT                                                                                           | 1.5 A   |
| FORWARD VOLTAGE DROP                                                                                           | 10 V    |
| WARM-UP TIME                                                                                                   | 30 s    |
| <i>Peak inverse rating is temperature-dependent; 15 kV is the highest printed maximum in the source table.</i> |         |

575A is listed in the supplied Amperex material as a convection-cooled mercury-vapor half-wave rectifier. Published ratings and characteristics were captured from the supplied table.



## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1950 General Electric Transmitting Types

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

## 1950 GENERAL ELECTRIC TRANSMITTING TYPES

## Section 1 · Rectifier

| CHARACTERISTIC          |                 |                  |
|-------------------------|-----------------|------------------|
| PARAMETER               | PUBLISHED VALUE | CONDITION / NOTE |
| HeaterOrFilamentVoltage | 5 V             | —                |



## SOURCE OPERATING CONDITIONS

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# 1953 Amperex

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

## 1953 AMPEREX

## Section 1 · Rectifier

| OTHER                                                           |                 |                        |
|-----------------------------------------------------------------|-----------------|------------------------|
| PARAMETER                                                       | PUBLISHED VALUE | CONDITION / NOTE       |
| Filament preheating period                                      | 30 s            | Published source value |
| Maximum average plate current, out-of-phase filament excitation | 2.5 A           | Published source value |
| Maximum peak plate current, out-of-phase filament excitation    | 10 A            | Published source value |



# 1956 RCA Transmitting Tubes

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

## 1956 RCA TRANSMITTING TUBES

### Section 1 · Rectifier

| CHARACTERISTIC          |                 |                  |
|-------------------------|-----------------|------------------|
| PARAMETER               | PUBLISHED VALUE | CONDITION / NOTE |
| HeaterOrFilamentVoltage | 5 V             | —                |
| HeaterOrFilamentCurrent | 10 A            | —                |



SOURCE DATA APPENDIX

## SOURCE OPERATING CONDITIONS

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# 1958 Amperex Industrial

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

## 1958 AMPEREX INDUSTRIAL

### Section 1 · Rectifier

| CHARACTERISTIC        |                 |                       |
|-----------------------|-----------------|-----------------------|
| PARAMETER             | PUBLISHED VALUE | CONDITION / NOTE      |
| Filament heating time | 30 s            | HalfWave;MercuryVapor |
| Tube voltage drop     | 10 V            | HalfWave;MercuryVapor |

| OTHER                                 |                 |                       |
|---------------------------------------|-----------------|-----------------------|
| PARAMETER                             | PUBLISHED VALUE | CONDITION / NOTE      |
| Peak inverse anode voltage maximum    | 15000 V         | HalfWave;MercuryVapor |
| Peak anode current maximum            | 6 A             | HalfWave;MercuryVapor |
| Average anode current maximum         | 1.5 A           | HalfWave;MercuryVapor |
| Surge current maximum                 | 60 A            | HalfWave;MercuryVapor |
| Recommended mercury temperature range | +20 to +50 °C   | MercuryVapor          |



## SOURCE OPERATING CONDITIONS

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# 1962 Eimac

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

1962 EIMAC

## Section 1 · Rectifier

| CHARACTERISTIC         |                 |                  |
|------------------------|-----------------|------------------|
| PARAMETER              | PUBLISHED VALUE | CONDITION / NOTE |
| Anode starting voltage | 20 V            | —                |

| OTHER                 |                 |                  |
|-----------------------|-----------------|------------------|
| PARAMETER             | PUBLISHED VALUE | CONDITION / NOTE |
| Filament heating time | 30 s            | —                |



## SOURCE OPERATING CONDITIONS

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# 1963 Amperex Condensed

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

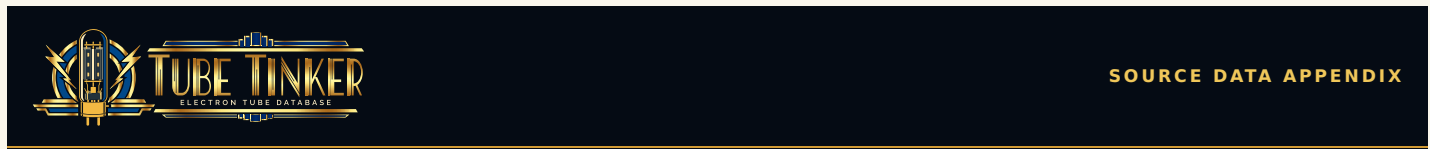
1963 AMPEREX CONDENSED

## Section 1 · Rectifier

| CHARACTERISTIC    |                 |                       |
|-------------------|-----------------|-----------------------|
| PARAMETER         | PUBLISHED VALUE | CONDITION / NOTE      |
| Filament voltage  | 5 V             | MercuryVaporRectifier |
| Filament current  | 10 A            | MercuryVaporRectifier |
| Heating time      | 30 s            | MercuryVaporRectifier |
| Tube voltage drop | 10 V            | MercuryVaporRectifier |

| OTHER                        |                 |                       |
|------------------------------|-----------------|-----------------------|
| PARAMETER                    | PUBLISHED VALUE | CONDITION / NOTE      |
| Maximum peak inverse voltage | 15000 V         | HalfWave MercuryVapor |
|                              |                 |                       |

| PARAMETER                  | PUBLISHED VALUE | CONDITION / NOTE      |
|----------------------------|-----------------|-----------------------|
| Maximum peak plate current | 6 A             | HalfWave MercuryVapor |
| Maximum DC output current  | 1.5 A           | HalfWave MercuryVapor |
| Maximum frequency          | 60 Hz           | HalfWave MercuryVapor |



## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1965 Eimac Tube Manual

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

## 1965 EIMAC TUBE MANUAL

### Section 1 · Rectifier

| OTHER                               |                 |                  |
|-------------------------------------|-----------------|------------------|
| PARAMETER                           | PUBLISHED VALUE | CONDITION / NOTE |
| Filament Voltage                    | 5 V             | —                |
| Filament Current                    | 9.0-11.5 A      | —                |
| Filament Heating Time               | 30 s            | —                |
| Peak Inverse Anode Voltage          | 15000 V         | —                |
| Peak Anode Current - Quadrature     | 10 A            | —                |
| Peak Anode Current - In Phase       | 6 A             | —                |
| Average Anode Current - Quadrature  | 2.5 A           | —                |
| Average Anode Current - In Phase    | 1.5 A           | —                |
| Maximum AC Short-Circuit Current    | 100 A           | —                |
| Condensed Mercury Temperature Range | 20-50 C         | —                |



# 1971 Machlette Laboratories

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

1971 MACHLETTE LABORATORIES

## Section 1 · Rectifier

| OTHER             |                 |                  |
|-------------------|-----------------|------------------|
| PARAMETER         | PUBLISHED VALUE | CONDITION / NOTE |
| Maximum frequency | 150 Hz          | —                |



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.

1971 RCA HB3 BINDER 6 OF 7

## Section 1 · Rectifier

| OTHER                                                 |                 |                                   |
|-------------------------------------------------------|-----------------|-----------------------------------|
| PARAMETER                                             | PUBLISHED VALUE | CONDITION / NOTE                  |
| Peak Inverse Anode Voltage                            | 15000 V         | Mercury-vapor half-wave rectifier |
| Peak Anode Current, Quadrature Filament Excitation    | 10 A            | Mercury-vapor half-wave rectifier |
| Average Anode Current, Quadrature Filament Excitation | 2.5 A           | Mercury-vapor half-wave rectifier |
| Average Anode Current, In-Phase Filament Excitation   | 1.5 A           | Mercury-vapor half-wave rectifier |
| Maximum AC Short-Circuit Current                      | 100 A           | Mercury-vapor half-wave rectifier |

| CHARACTERISTICS               |                 |                                   |
|-------------------------------|-----------------|-----------------------------------|
| PARAMETER                     | PUBLISHED VALUE | CONDITION / NOTE                  |
| Tube Voltage Drop             | 10 V            | Mercury-vapor half-wave rectifier |
| Minimum Filament Heating Time | 30 s            | Mercury-vapor half-wave rectifier |

## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1975 Eimac Tube Manual

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

## 1975 EIMAC TUBE MANUAL

## Section 1 · Rectifier

| CHARACTERISTIC         |                 |                  |
|------------------------|-----------------|------------------|
| PARAMETER              | PUBLISHED VALUE | CONDITION / NOTE |
| Filament Current Range | 9 A–11.5 A      | —                |

| OTHER                                    |                 |                  |
|------------------------------------------|-----------------|------------------|
| PARAMETER                                | PUBLISHED VALUE | CONDITION / NOTE |
| Anode Starting Voltage                   | 20 V            | —                |
| Condensed Mercury Temperature Range 15kV | 20–50 C         | —                |
| Condensed Mercury Temperature Range 10kV | 20–60 C         | —                |
| Peak Anode Current Quadrature            | 10 A            | —                |
| Peak Anode Current InPhase               | 7 A             | —                |
| Average Anode Current Quadrature         | 2.5 A           | —                |
| Average Anode Current InPhase            | 1.75 A          | —                |
| AC Short Circuit Current Maximum         | 100 A           | —                |

## SOURCE OPERATING CONDITIONS

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# 1976 Eimac Tube Manual

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

## 1976 EIMAC TUBE MANUAL

| CHARACTERISTIC         |                 |                  |
|------------------------|-----------------|------------------|
| PARAMETER              | PUBLISHED VALUE | CONDITION / NOTE |
| Filament Current Range | 9 A–11.5 A      | —                |

| OTHER                                    |                 |                  |
|------------------------------------------|-----------------|------------------|
| PARAMETER                                | PUBLISHED VALUE | CONDITION / NOTE |
| Anode Starting Voltage                   | 20 V            | —                |
| Condensed Mercury Temperature Range 15kV | 20–50 C         | —                |
| Condensed Mercury Temperature Range 10kV | 20–60 C         | —                |
| Peak Anode Current Quadrature            | 10 A            | —                |
| Peak Anode Current InPhase               | 7 A             | —                |
| Average Anode Current Quadrature         | 2.5 A           | —                |
| Average Anode Current InPhase            | 1.75 A          | —                |
| AC Short Circuit Current Maximum         | 100 A           | —                |

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