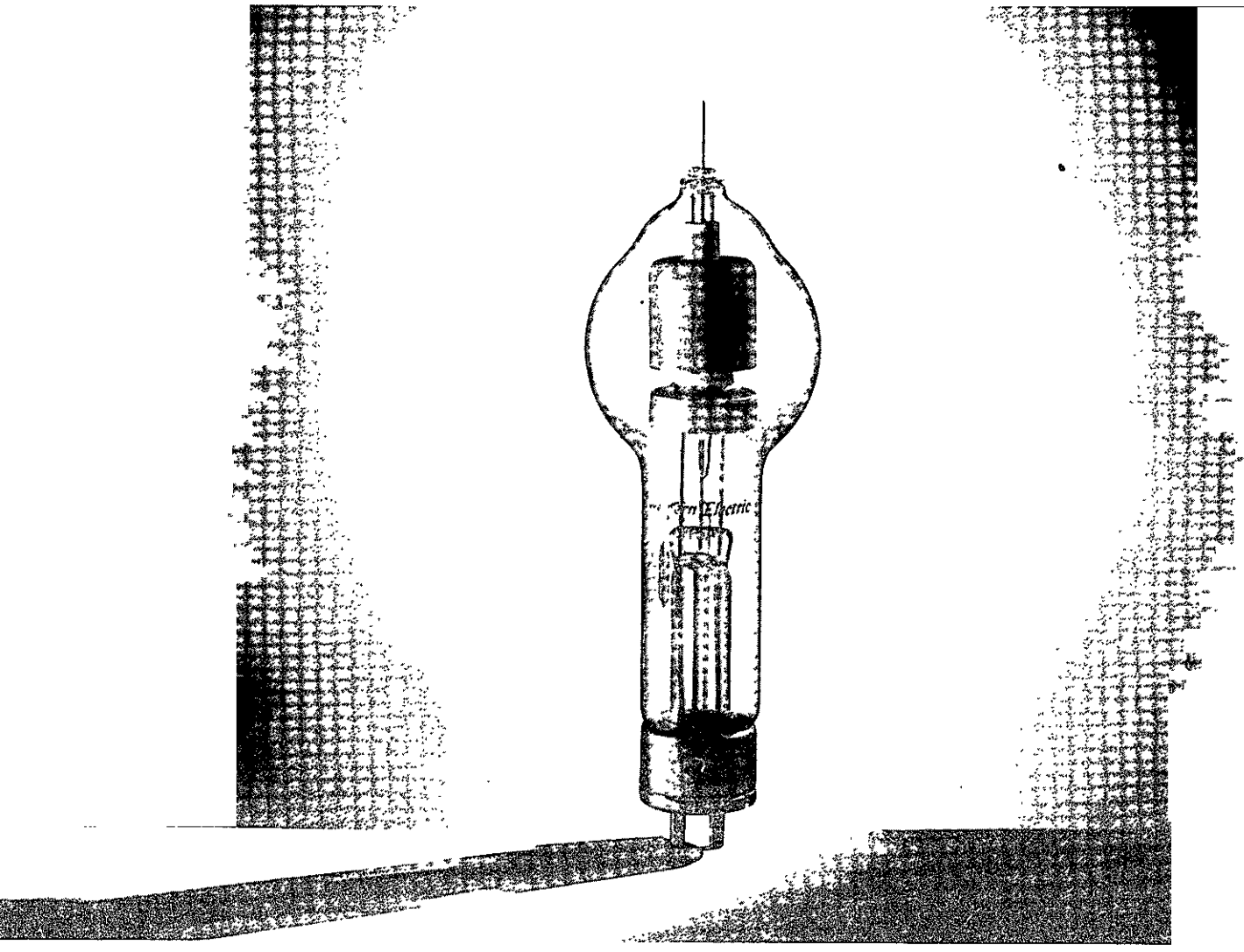


# RECTIFIER
# HALF-WAVE, MERCURY-VAPOR

Western Electric

## DESCRIPTION

The 315A is a half-wave, mercury-vapor rectifier tube for use in high-voltage rectifier circuits.

## MAXIMUM RATINGS

| | |
|---|---|
| Peak Inverse Anode Voltage | 12500 volts |
| Average Cathode Current (Quadrature Operation) | 2 amperes |

## MAXIMUM RATINGS, ABSOLUTE VALUES

| | | |
|---|---|---|
| Peak Inverse Anode Voltage for | | |
| Condensed Mercury Temperature 20 to 55 C | 12500 | volts |
| Condensed Mercury Temperature 20 to 65 C | 7500 | volts |
| Cathode Current | | |
| Peak | | |
| In-phase Operation | 4 | amperes |
| Quadrature Operation | 8 | amperes |
| Average | | |
| In-phase Operation | 1 | ampere |
| Quadrature Operation | 2 | amperes |
| Surge (maximum duration 0.1 second) | 40 | amperes |
| Averaging Time | 15 | seconds |
| Frequency | 150 | cycles/sec. |

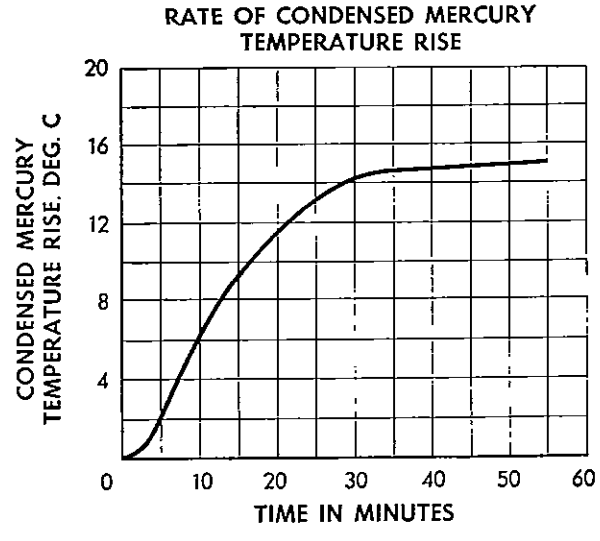
## ELECTRICAL DATA

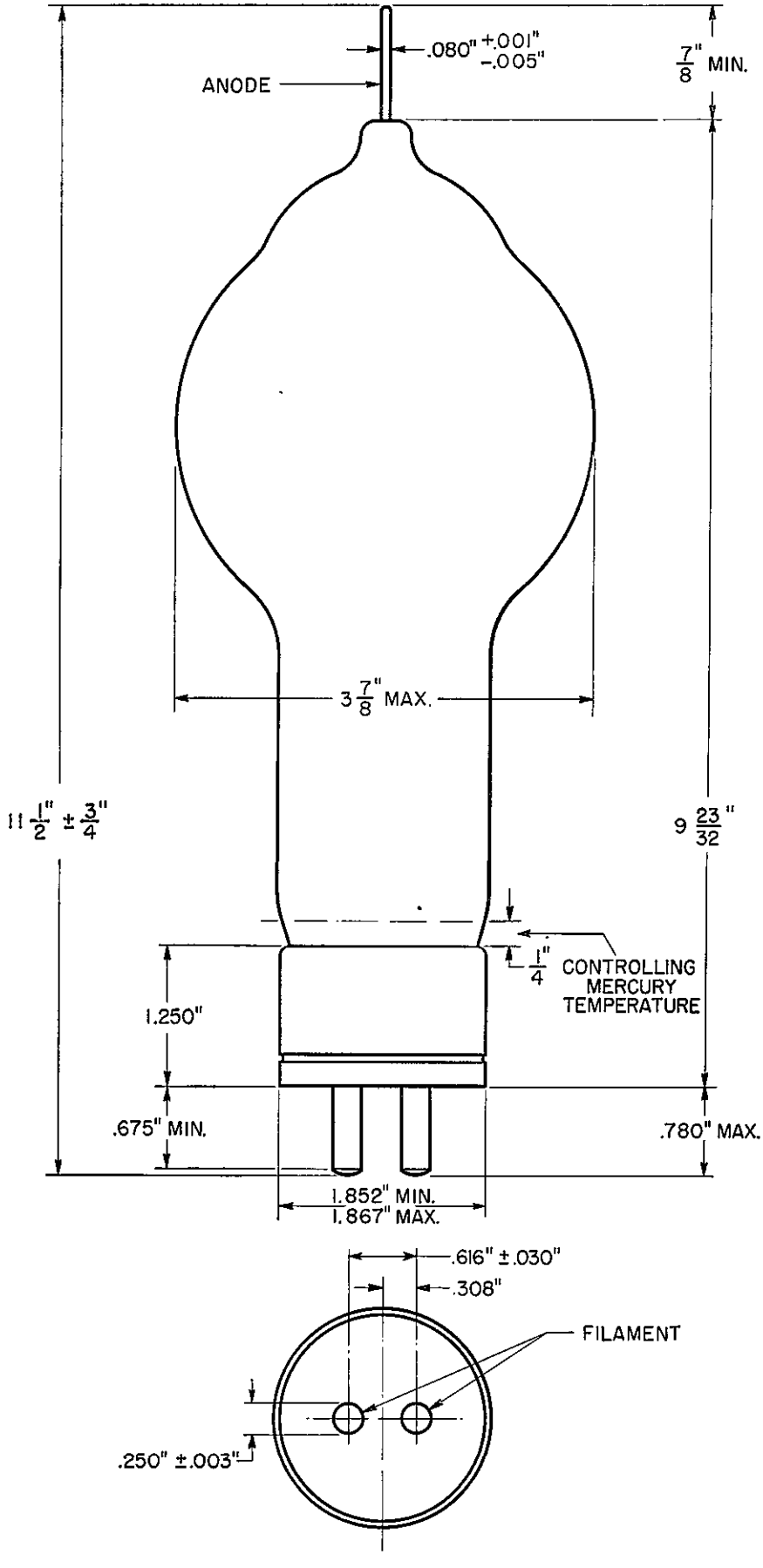
| | Min. | Bogey | Max. | |
|---|---|---|---|---|
| Filament Voltage | 4.75 | 5.0 | 5.25 | volts |
| Filament Current at 5 Volts | | 10 | 11.5 | amperes |
| Cathode Heating Time, Required | 30 | | | seconds |
| Anode Voltage Drop | | 15 | | volts |
| Critical Anode Voltage | | | 100 | volts |

## MECHANICAL DATA

| | | |
|---|---|---|
| Net Weight, Approximate | 10 | ounces |
| Equilibrium Condensed Mercury Temperature Rise | | |
| At Full Load, Approximate | 18 | centigrade |
| At No Load, Approximate | 15 | centigrade |
| Cooling | | Convection |

Mounting . . . This tube should be mounted in a vertical position only, with the base end down. Sufficient clearance should be maintained around the tube to insure free air circulation.




.080" +.001" -.005"
ANODE
7/8" MIN.
3 7/8" MAX.
11 1/2" ± 3/4"
9 23/32"
1/4" CONTROLLING MERCURY TEMPERATURE
1.250"
.675" MIN.
.780" MAX.
1.852" MIN.
1.867" MAX.
.616" ± .030"
.308"
FILAMENT
.250" ± .003"

*Western Electric*

A development of Bell Telephone Laboratories, the research laboratories of the American Telephone and Telegraph Company and the Western Electric Company

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