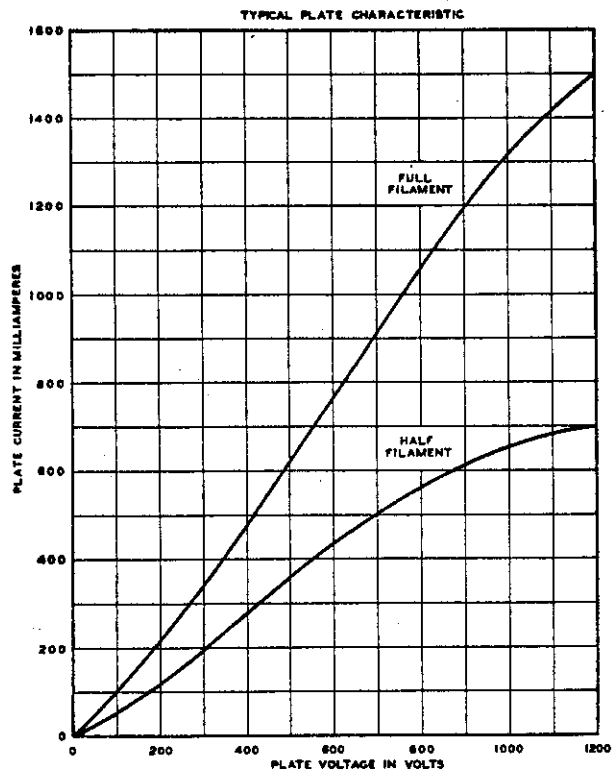
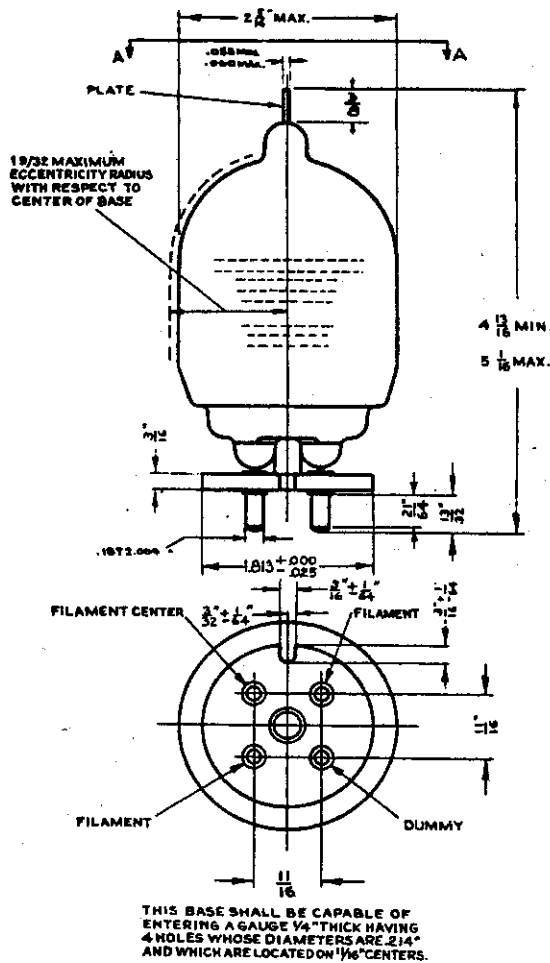


**TECHNICAL INFORMATION**  
**WESTERN ELECTRIC 705A (378A) VACUUM TUBE**



**CLASSIFICATION**

This vacuum tube is a high vacuum filamentary air cooled diode intended primarily for use as a rectifier in high voltage circuits. The electrodes are supported directly from the hard glass envelope in such a manner that adequate cooling of all seals is accomplished and the elimination of internal insulators insures satisfactory performance under high voltage conditions.

**MOUNTING**

This tube is provided with a large, four prong, wafer type base for use in a Western Electric 152A or any similar socket. The plate terminal is at the top of the envelope. The preferred position for mounting is vertical and a free circulation of air around the bulb should be provided to assure proper cooling.

**FILAMENT**

Thoriated tungsten designed for operation on a voltage basis.

The tube may be operated using only half the filament but it is not recommended that the two filament halves be operated in parallel.

|                           | <u>Half Filament</u> | <u>Full Filament</u> |
|---------------------------|----------------------|----------------------|
| Filament Voltage          | 2.5                  | 5.0 volts            |
| Nominal Filament Current  | 5.0                  | 5.0 amperes          |
| Nominal Filament Emission | .6                   | 1.25 amperes         |

**RATINGS**

Rectifier

|                                                     |        |                  |
|-----------------------------------------------------|--------|------------------|
| Maximum Peak Inverse Voltage                        | 30,000 | 30,000 volts     |
| Maximum Average Plate Dissipation                   | 60     | 60 watts         |
| With Forced Air Cooling                             | 75     | 75 watts         |
| Maximum Average Plate Current Per Tube:             |        |                  |
| Peak Inverse Voltage not greater than 15,000 Volts. | 75     | 150 Milliamperes |
| Peak Inverse Voltage of 30,000 Volts                | 50     | 100 Milliamperes |

For Peak Inverse Voltages between

15,000 and 30,000, Max. Ave. Plate Current is equal to

$100 + 3.33 (30 - \text{Peak Inverse Kv})$  milliamperes for full

filament or  $1/2$  this value for half filament

Surge Limiting Diode

|                              |              |
|------------------------------|--------------|
| *Filament Voltage            | 5.5 volts    |
| Maximum Peak Inverse Voltage | 35,000 volts |
| Maximum Peak Forward Voltage | 10,000 volts |
| Maximum Average Plate Power  | 75 watts     |

\*Maximum emission is desired for surge limiting diode applications. When 5.5 volts are applied the filament life may be reduced to  $1/4$  the value obtained when 5.0 volts are applied.

FOR IMMEDIATE REFERENCE ONLY  
REISSUES WILL NOT BE FURNISHED  
UNLESS SPECIFICALLY REQUESTED