



Type 1B24

TR Tube

GENERAL CHARACTERISTICSElectrical

|                                                                                                                                                                                       |                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Max. Ignitor Ignition Time                                                                                                                                                            | 5 Seconds              |
| Max. Insertion Loss                                                                                                                                                                   | 1.5 Decibels           |
| Frequency Tuning Range                                                                                                                                                                | 8490 - 9600 Megacycles |
| Ignitor Voltage Drop for 100<br>Microamperes                                                                                                                                          | 325 - 450 Volts        |
| Max. Peak Leakage Power                                                                                                                                                               | 30 Milliwatts          |
| Max. Loaded Q                                                                                                                                                                         | 350                    |
| Recovery Time - Loss of signal in the<br>tube four microseconds following<br>the pulse shall not be more than<br>3 db in excess of the loss, 100<br>microseconds following the pulse. |                        |
| Ignitor Interaction, Max.                                                                                                                                                             | 0.2 Decibel            |

Mechanical

|                      |             |
|----------------------|-------------|
| Ionizable Medium     | Gas         |
| Number of Electrodes | *2          |
| Dimensions           | See Outline |
| Mounting Position    | Any         |

MAXIMUM RATINGS

|                                  |                       |
|----------------------------------|-----------------------|
| Ignitor Open Circuit Voltage, DC | -750 to -1000 Volts   |
| Ignitor Current                  | 100 to 200 Microamps. |
| Ambient Temperature Range        | -50 to +100°C         |

\* The two points at the center of the tube constitute an rf gap, while the ignitor (at extreme end of reservoir and negative) and body constitute a dc gap used to produce ionization to help trigger the rf gap.

Bloomfield, New Jersey

December 5, 1945

Technical drawing of a vacuum tube assembly, showing side and front views with dimensions and labels.

**Labels:**

- CAP #C1-2
- IGNITOR
- GLASS RESERVOIR
- TUNER

**Dimensions (Side View):**

- Top section diameter:  $1\frac{1}{4}$ " MAX.
- Top section height:  $3\frac{1}{4}$ " MAX.
- Bottom section height:  $2\frac{7}{8}$ " MAX.
- Bottom section diameter:  $1\frac{19}{64}$ " MAX.
- Bottom section height:  $1\frac{15}{16}$ " MIN.
- Bottom section height:  $1\frac{27}{64}$ " MAX.
- Bottom section diameter:  $.530$ "  $\pm .003$
- Bottom section diameter:  $.610$ "  $\pm .002$
- Bottom section diameter:  $.610$ "  $\pm .002$
- Bottom section diameter:  $.640$ "  $\pm .002$
- Bottom section diameter:  $.640$ "  $\pm .002$
- Bottom section diameter:  $.090$ " R.  $\pm .002$ " 4 SLOTS

**Dimensions (Front View):**

- Top section diameter:  $.615$ " MAX.  $.609$ " MIN.
- Top section diameter:  $1.760$ " DIA. MAX.
- Top section diameter:  $\frac{1}{2}$ "

**NOTE:** MAXIMUM PROJECTION RESERVOIR LIES WITH CYLINDER OF  $1\frac{1}{4}$ " DI. WITH THE AXIS CO-L WITH TUBE AXIS.

NOTE  
MAXIMUM PROJECTION OF  
RESERVOIR LIES WITHIN A  
CYLINDER OF 1 1/4" DIA.  
WITH THE AXIS CO-LINEAR  
WITH TUBE AXIS.