

# ***Federal Telecommunication Laboratories, Inc.***

**67 BROAD STREET**

**NEW YORK 4, N. Y.**

## **TYPE 8C23**

The 8C23 is a 3 electrode tube designed for use as a UHF pulse oscillator. The anode is forced-air-cooled and is capable of dissipating 1 kilowatt. The cathode is a thoriated-tungsten filament. Maximum ratings apply up to 600 megacycles.

### **Electrical Data**

|                                                           | <b><u>Min.</u></b> | <b><u>Bogey</u></b> | <b><u>Max.</u></b> |         |
|-----------------------------------------------------------|--------------------|---------------------|--------------------|---------|
| Filament Voltage                                          |                    | 4.1                 |                    | volts   |
| Filament Current                                          | 296                | 320                 | 344                | amperes |
| Filament Starting Current                                 |                    |                     | 480                | amperes |
| Filament Cold Resistance                                  |                    | .0017               |                    | ohms.   |
| Amplification Factor at $I_b = 28.0$ amp.<br>$E_c = -100$ | 7                  | 9                   | 11                 |         |

### **Interelectrode Capacitances**

|                |      |      |      |     |
|----------------|------|------|------|-----|
| Grid-Plate     | 11.7 | 13.7 | 15.8 | uuf |
| Grid-Filament  | 19.4 | 23.7 | 27.9 | uuf |
| Plate-Filament | 1.05 | 1.57 | 2.08 | uuf |

### **Mechanical Data**

|                                        |     |     |      |        |
|----------------------------------------|-----|-----|------|--------|
| Mounting Position-Vertical             |     |     |      |        |
| Type of Cooling-Forced-Air             |     |     |      |        |
| Maximum Incoming Air Temperature       |     |     |      | 45°C   |
| Required Air Flow on Anode             |     |     |      |        |
| Plate Dissipation-Kilowatts            | 1.0 | 0.8 | 0.6  |        |
| Air Flow-Cubic Feet per Minute         | 55  | 45  | 40   |        |
| Pressure-Inches Water                  | 2.7 | 1.8 | 1.4  |        |
| Required Air Flow on Bulb or Stem (1)  | 15  |     |      | CFM    |
| Maximum Glass Temperature (Anode Seal) |     |     | 200° | C      |
| Net Weight, approximate                |     |     | 7.0  | pounds |

- (1) May be obtained by directing approximately 15 cubic feet per minute across stem by the use of a suitable blower.

### **Maximum Ratings**

#### **Plate-Modulated Class C Pulse Oscillator**

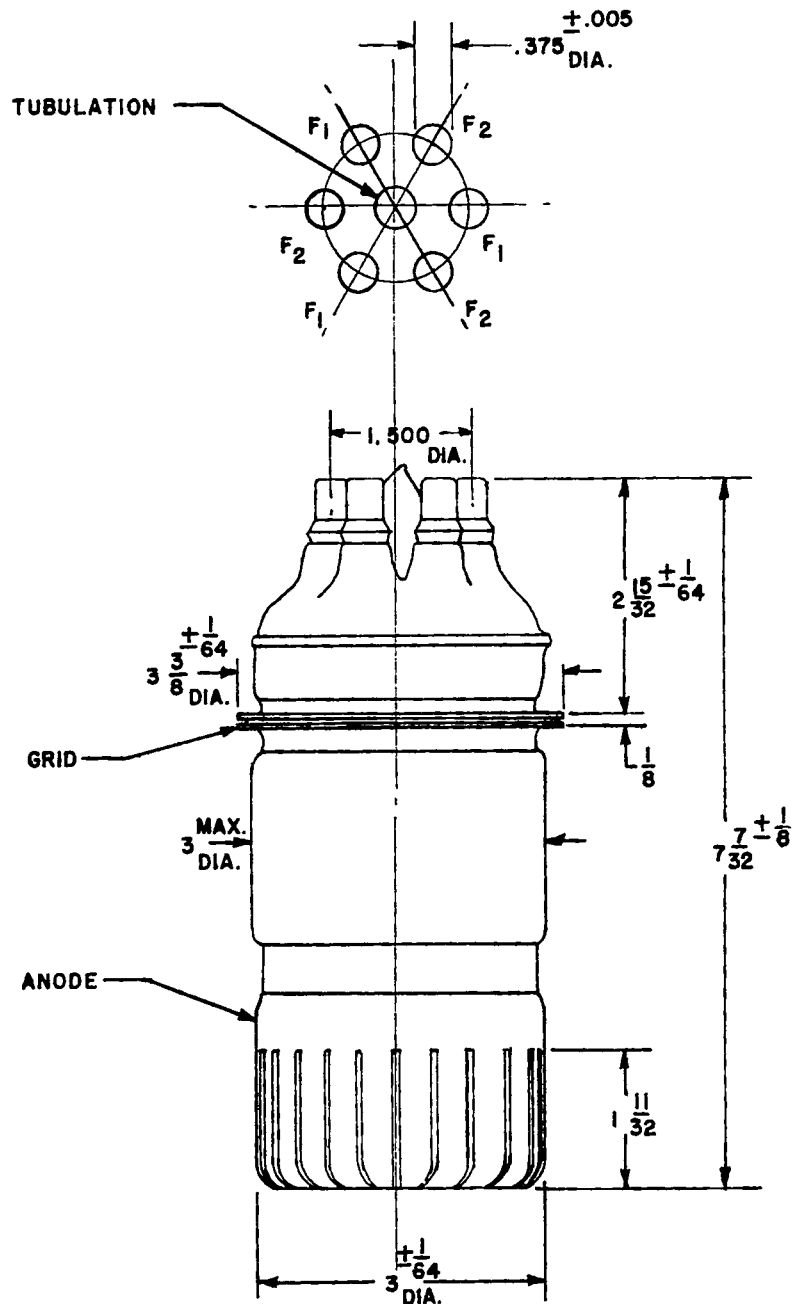
|                                  |       |      |        |
|----------------------------------|-------|------|--------|
| D-C Plate Voltage                | 21000 | max. | volts  |
| D-C Grid Voltage                 | 4000  | max. | volts  |
| D-C Plate Current (during pulse) | 50    | max. | amps.  |
| D-C Plate Current                | 25    | max. | ma.    |
| D-C Grid Current                 | 10    | max. | ma.    |
| Average Power Input              | 525   | max. | watts  |
| Plate Dissipation                | 500   | max. | watts  |
| Duty Cycle                       | .05   | max. | %      |
| Pulse Duration                   | 5     | max. | u sec. |



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