



6026

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# OSCILLATOR TRIODE

SUBMINIATURE TYPE

For radiosonde service at 400 Mc

## GENERAL DATA

### Electrical:

Heater, for Unipotential Cathode:

|                       |            |                |
|-----------------------|------------|----------------|
| Voltage range*        | 5.2 to 6.6 | ac or dc volts |
| Current at 6.3 volts. | 0.2        | amp            |

Direct Interelectrode Capacitances (Approx.):<sup>o</sup>

|                             |      |                  |   |
|-----------------------------|------|------------------|---|
| Grid to plate               | 1.3  | $\mu\mu\text{f}$ |   |
| Grid to cathode and heater  | 2    | $\mu\mu\text{f}$ | ← |
| Plate to cathode and heater | 0.42 | $\mu\mu\text{f}$ | ← |

### Characteristics, Class A<sub>1</sub> Amplifier:

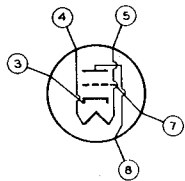
|                            |      |                  |
|----------------------------|------|------------------|
| Plate-Supply Voltage       | 120  | volts            |
| Cathode Resistor           | 220  | ohms             |
| Amplification Factor       | 24   |                  |
| Plate Resistance (Approx.) | 4000 | ohms             |
| Transconductance           | 5900 | $\mu\text{mhos}$ |
| Plate Current              | 12   | ma               |

### Mechanical:

|   |                         |   |
|---|-------------------------|---|
| Mounting Position                             | Any                     |   |
| Maximum Length (Excluding flexible leads)     | 1-1/2"                  |   |
| Length, Bulb Seat to Bulb Top (Excluding tip) | 1.200" $\pm$ 0.060"     | ← |
| Maximum Diameter                              | 0.400"                  |   |
| Dimensional Outline                           | See General Section     |   |
| Bulb  | T-3                     |   |
| Leads, Flexible                               | 5                       |   |
| Length  | 1-1/2" to 1-3/4"        |   |
| Orientation and diameter                      | See Dimensional Outline | ← |

BOTTOM VIEW

Lead 3 - Cathode  
 Lead 4 - Heater  
 Lead 5 - Heater



Lead 7 - Grid  
 Lead 8 - Plate

## OSCILLATOR - Class C Telegraphy

### Maximum Ratings\*, Absolute Values:

|                       |          |       |
|-----------------------|----------|-------|
| DC PLATE VOLTAGE      | 150 max. | volts |
| DC GRID VOLTAGE       | -50 max. | volts |
| TOTAL CATHODE CURRENT | 40 max.  | ma    |

\* Heater-voltage range and maximum ratings are established on basis that tube heater will be supplied from batteries in radiosonde and similar applications utilizing equipment designed for extreme compactness and light weight and requiring tube life of only a few hours.

<sup>o</sup> Without external shield.

← Indicates a change.



## OSCILLATOR TRIODE

|                                       |          |       |
|---------------------------------------|----------|-------|
| DC GRID CURRENT . . . . .             | 10 max.  | ma    |
| PLATE INPUT . . . . .                 | 3.3 max. | watts |
| PLATE DISSIPATION . . . . .           | 3 max.   | watts |
| PEAK HEATER-CATHODE VOLTAGE . . . . . | 0 max.   | volts |

### Typical Operation as Oscillator at 400 Mc:

|                                     |      |       |
|-------------------------------------|------|-------|
| DC Plate Voltage . . . . .          | 135  | volts |
| Grid Resistor . . . . .             | 1300 | ohms  |
| DC Plate Current . . . . .          | 20   | ma    |
| DC Grid Current (Approx.) . . . . . | 9.5  | ma    |
| Useful Power Output . . . . .       | 1.25 | watts |

### CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

|                                     | Note | Min.  | Max.  |                  |
|-------------------------------------|------|-------|-------|------------------|
| Heater Current:                     |      |       |       |                  |
| With 5.2 volts ac on heater . . .   | -    | 0.176 | -     | amp              |
| With 6.6 volts ac on heater . . .   | -    | -     | 0.225 | amp              |
| Direct Interelectrode Capacitances: |      |       |       |                  |
| Grid to plate . . . . .             | 1    | 1.05  | 1.55  | $\mu\text{mf}$   |
| Grid to cathode and heater . . .    | 1    | 1.55  | 2.45  | $\mu\text{mf}$   |
| Plate to cathode and heater . . .   | 1    | 0.345 | 0.495 | $\mu\text{mf}$   |
| Amplification Factor . . . . .      | 2    | 17    | 31    |                  |
| Transconductance . . . . .          | 3    | 4200  | 7600  | $\mu\text{mhos}$ |
| Transconductance . . . . .          | 4    | 4600  | 8000  | $\mu\text{mhos}$ |
| Plate Current . . . . .             | 3    | 8     | 16    | ma               |
| Plate Current . . . . .             | 4    | 9.5   | 18.5  | ma               |
| Plate Current . . . . .             | 5    | -     | 300   | $\mu\text{amp}$  |

Note 1: Without external shield.

Note 2: With 5.2 or 6.3 volts ac on heater, dc plate-supply volts = 120, and cathode resistor (ohms) = 220.

Note 3: With 5.2 volts ac on heater, dc plate-supply volts = 120, and cathode resistor (ohms) = 220.

Note 4: With 6.3 volts ac on heater, dc plate-supply volts = 120, and cathode resistor (ohms) = 220.

Note 5: With 5.2 volts ac on heater, dc plate-supply volts = 120, dc grid volts = -12, and cathode resistor (ohms) = 220.

### OPERATING CONSIDERATIONS

It is recommended that the cathode of the 6026 be connected directly to the heater.

The *flexible leads* of the 6026 are usually soldered to the circuit elements. Soldering of the connections should be made as far as possible from the glass button. If this precaution is not followed, the heat of the soldering operation may crack the glass seals and damage the tube.

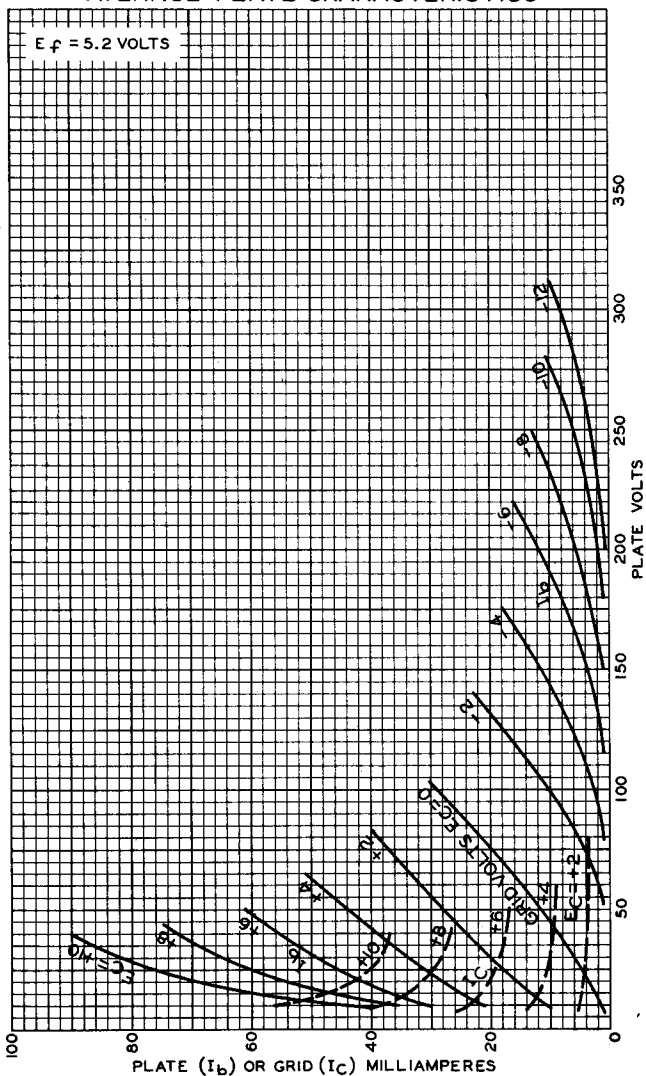
→ Indicates a change.



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### AVERAGE PLATE CHARACTERISTICS



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TUBE DEPARTMENT  
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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