

# Federal Telephone and Radio Corporation



100 KINGSLAND ROAD • CLIFTON, NEW JERSEY



## TYPE 7C30

High Vacuum Triode, Power Amplifier, Oscillator

### General Characteristics

#### Electrical

|                                    |                    |
|------------------------------------|--------------------|
| Filament Type                      | Thoriated Tungsten |
| Filament Voltage                   | 16.0 volts         |
| Filament Current                   | 28.5 amperes       |
| Amplification Factor               | 27                 |
| Direct Inter-electrode Capacitance |                    |
| Grid-Plate                         | 14.0 uuf           |
| Grid-Filament                      | 18.0 uuf           |
| Plate-Filament                     | 0.4 uuf            |
| Frequency for Maximum Ratings      | 1.6 mc.            |

#### Mechanical

|                            |                      |
|----------------------------|----------------------|
| Type of Cooling            | Forced-air           |
| Minimum Flow               | 175 CFM              |
| Minimum Pressure           | 2.5 inches of water  |
| Maximum Overall Dimensions |                      |
| Length                     | 7-7/16 inches        |
| Diameter                   | 3.532 inches         |
| Connections                | See outline drawing  |
| Mounting Position          | Vertical, anode down |
| Direction of Air Flow      | Up                   |

### Maximum Ratings and Typical Operation

Class C R-F Power Amplifier and Oscillator

C-W, Telegraphy (Key down conditions without modulation)

|                     | <u>Typical Operation</u> | <u>Maximum Rating</u> |         |
|---------------------|--------------------------|-----------------------|---------|
| D-C Plate Voltage   | 6,000                    | 6,000                 | volts   |
| D-C Plate Current   | 1.6                      | 2.0                   | amperes |
| D-C Grid Voltage    | -800                     | -1,000                | volts   |
| D-C Grid Current    | .170                     | .200                  | amperes |
| Plate Input         | 9,600                    | 12,000                | watts   |
| Plate Dissipation   |                          | 3,000                 | watts   |
| Power Output        | 7,500                    |                       | watts   |
| Driving Power       | 190 (approx.)            |                       | watts   |
| Peak R-F Grid Input | 1,180                    |                       | volts   |

from RMA release # 545, Dec. 5, 1946

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Class C R-F Power Amplifier -- Telephony

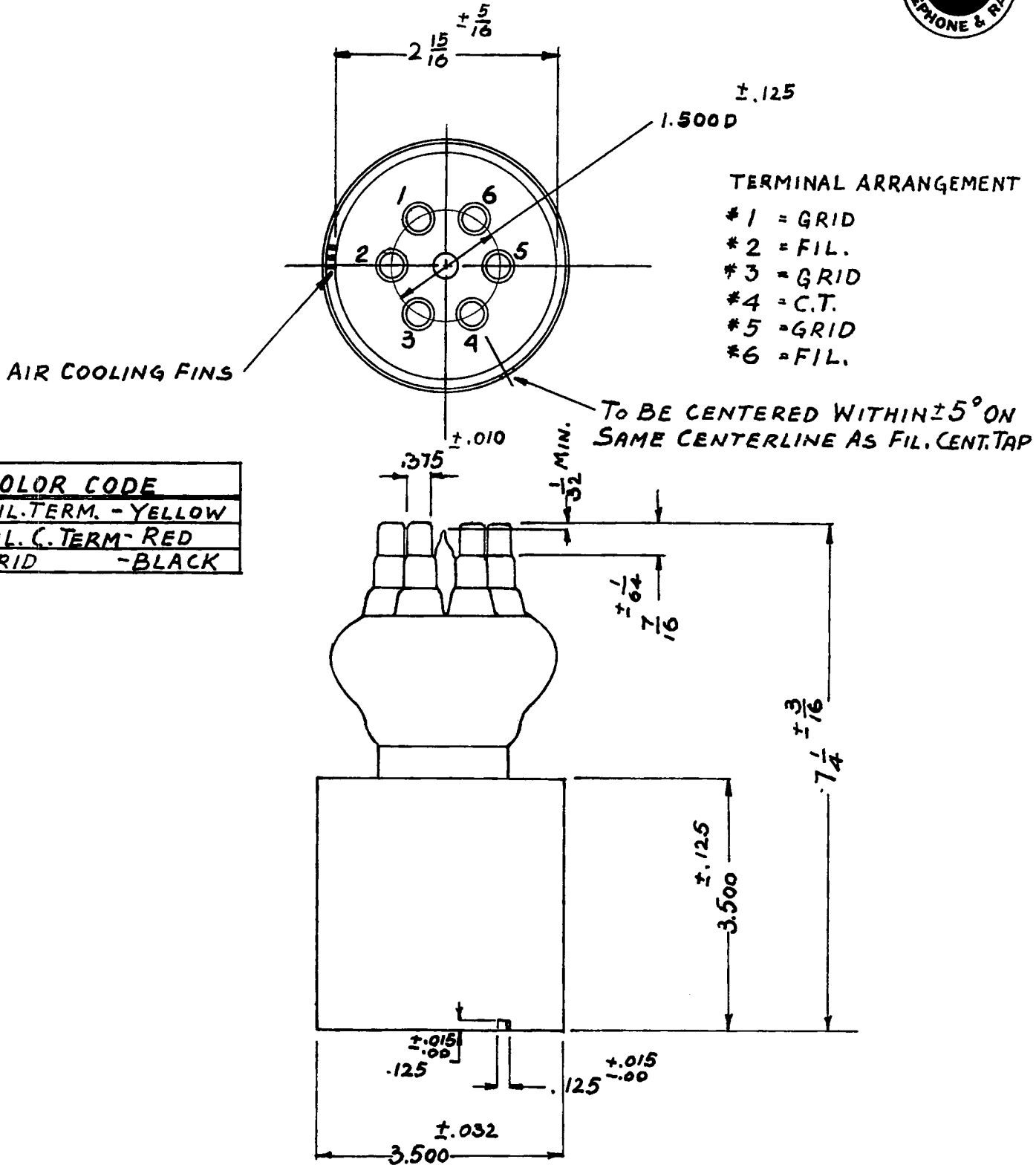
Plate Modulated (Carrier conditions with modulation factor up to 1.0)

|                     | <u>Typical Operation</u> | <u>Maximum Rating</u> |         |
|---------------------|--------------------------|-----------------------|---------|
| D-C Plate Voltage   | 3,750                    | 5,000                 | volts   |
| D-C Plate Current   | 1.0                      | 1.5                   | amperes |
| D-C Grid Voltage    | -425                     | -1,000                | volts   |
| D-C Grid Current    | .14                      | .200                  | amperes |
| Plate Input         | 3,750                    | 7,500                 | watts   |
| Plate Dissipation   | 1,150                    | 2,000                 | watts   |
| Power Output        | 2,600                    |                       | watts   |
| Driving Power       | 85 (approx.)             |                       | watts   |
| Peak R-F Grid Input | 670                      |                       | volts   |

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## DATA- AVERAGE GRID CHARACTERISTICS TYPE - 7C30

