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TRANSMITTING TRIODE

GENERAL DATA

Electrical:

Filament, Thoriated Tungsten:

| | | | |
|-------------------|-----|-----------|----------------|
| Voltage | 7.5 | | ac or dc volts |
| Current | 4.0 | | amp |

Amplification Factor. 47

Direct Interelectrode Capacitances:

| | | | |
|-----------------------------|------|-----------|---------------|
| Grid to Plate | 2.8 | | μf |
| Grid to Filament. | 5.3 | | μf |
| Plate to Filament | 0.25 | | μf |

Mechanical:

Mounting Position. Vertical only. Base down

Overall Length 5-7/8" \pm 3/16"

Seated Length. 5-1/4" \pm 3/16"

Maximum Diameter 2-13/16"

Bulb G-22

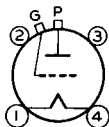
Cap (top) Medium

Cap (side) Small

Base Medium-Shell Small 4-Pin, Bayonet

Basing Designation for BOTTOM VIEW 2D1

Pin 1 - Filament
 Pin 2 - No Connection
 Pin 3 - No Connection



Pin 4 - Filament
 P - Plate (Top)
 G - Grid (Side)

AF POWER AMPLIFIER & MODULATOR - Class B

Maximum Ratings, Absolute Values:

| | CCS* | ICAS** | |
|-------------------------------------|-----------|-----------|-------|
| DC PLATE VOLTAGE. | 1500 max. | 2000 max. | volts |
| MAX.-SIGNAL DC PLATE CUR.*. | 150 max. | 150 max. | ma. |
| MAX.-SIGNAL PLATE INPUT*. | 150 max. | 225 max. | watts |
| PLATE DISSIPATION*. | 50 max. | 75 max. | watts |

Typical Operation:

| | Values are for 2 tubes | | |
|---|------------------------|-------|----------------------|
| DC Plate Voltage | 1250 | 1500 | 2000 volts |
| DC Grid Voltage#. | -16.5 | -22.5 | -36 volts |
| Peak AF Grid-to-Grid Volt. | 245 | 215 | 270 volts |
| Zero-Signal DC Plate Cur. | 40 | 30 | 40 ma. |
| Max.-Signal DC Plate Cur. | 230 | 190 | 220 ma. |
| Effective Load Resistance (plate-to-plate) | 12700 | 18300 | 21400 ohms |
| Max.-Signal Driving Power (Approx.) | 7.8 | 4.8 | 8.8 watts |

← Indicates a change.

* Averaged over any audio-frequency cycle of sine-wave form.

•, **, #: See next page.

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TRANSMITTING TRIODE

Max.-Signal Power Output (Approx.) 190 185 | 300 . . watts

* For ac filament supply.

PLATE-MODULATED RF POWER AMPLIFIER - Class C Telephony
 Carrier conditions per tube for use with a max. modulation factor of 1.0

Maximum Ratings, Absolute Values:

| | CCS* | | 1 CAS** | |
|-----------------------------|-----------|--|-----------|-------|
| DC PLATE VOLTAGE | 1250 max. | | 1600 max. | volts |
| DC GRID VOLTAGE | -400 max. | | -400 max. | volts |
| DC PLATE CURRENT | 125 max. | | 125 max. | ma. |
| DC GRID CURRENT | 35 max. | | 40 max. | ma. |
| PLATE INPUT | 135 max. | | 200 max. | watts |
| PLATE DISSIPATION | 35 max. | | 50 max. | watts |

Typical Operation:

| | | | | | |
|--|------|------|------|----|-------|
| DC Plate Voltage | 1000 | 1250 | 1600 | .. | volts |
| DC Grid Voltage* | -135 | -150 | -170 | .. | volts |
| | 3900 | 5000 | 4600 | .. | ohms |
| Peak RF Grid Voltage . . . | 270 | 270 | 300 | .. | volts |
| DC Plate Current | 120 | 100 | 125 | .. | ma. |
| DC Grid Current (Approx.) [□] | 35 | 30 | 37 | .. | ma. |
| Driving Power (Approx.) [□] | 9 | 7.5 | 10 | .. | watts |
| Power Output (Approx.) . . | 90 | 95 | 150 | .. | watts |

* obtained by grid resistor of value shown or by partial self-bias methods.

RF POWER AMPLIFIER & OSCILLATOR - Class C Telephony

Key-down conditions per tube without modulation[□]

Maximum Ratings, Absolute Values:

| | CCS* | | 1 CAS** | |
|-----------------------------|-----------|--|-----------|-------|
| DC PLATE VOLTAGE | 1500 max. | | 2000 max. | volts |
| DC GRID VOLTAGE | -400 max. | | -400 max. | volts |
| DC PLATE CURRENT | 150 max. | | 150 max. | ma. |
| DC GRID CURRENT | 35 max. | | 40 max. | ma. |
| PLATE INPUT | 200 max. | | 300 max. | watts |
| PLATE DISSIPATION | 50 max. | | 75 max. | watts |

Typical Operation:

| | | | | | |
|--|------|------|------|----|-------|
| DC Plate Voltage | 1250 | 1500 | 2000 | .. | volts |
| DC Grid Voltage ^Δ | -150 | -150 | -150 | .. | volts |
| | 4300 | 4300 | 4200 | .. | ohms |
| | 880 | 940 | 800 | .. | ohms |
| Peak RF Grid Voltage . . . | 290 | 300 | 280 | .. | volts |
| DC Plate Current | 135 | 125 | 150 | .. | ma. |
| DC Grid Current (Approx.) [□] | 35 | 35 | 36 | .. | ma. |
| Driving Power (Approx.) [□] | 9 | 9.5 | 9 | .. | watts |
| Power Output (Approx.) . . | 125 | 140 | 225 | .. | watts |

← Indicates a change.
 ● ●● □ □□ Δ: See next page.



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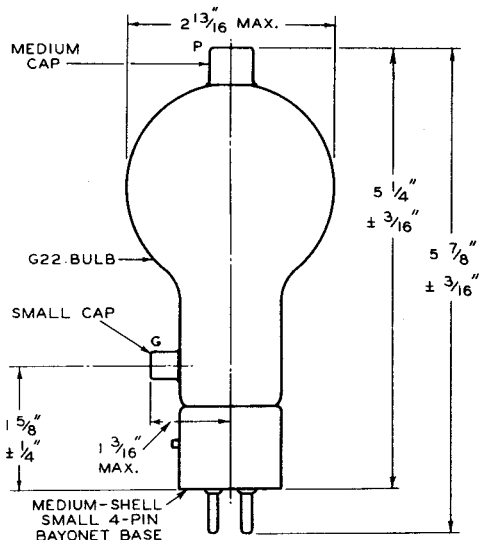
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TRANSMITTING TRIODE

- Continuous Commercial Service.
- Intermittent Commercial and Amateur Service.
- Subject to wide variations as explained on sheet TUBE RATINGS in General Section.
- ☒ Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier conditions.
- Δ Obtained from fixed supply, by grid resistor (4300, 4300, 4200) or by cathode resistor (880, 940, 800).

NOTE: When the 808 is used in the final amplifier or a preceding stage of a transmitter designed for break-in operation and oscillator keying, a small amount of fixed-bias must be used to maintain plate current at a safe value. With a plate voltage of 2000 volts, a fixed bias of at least -30 volts should be used.

Data on operating frequencies for the 808 are given on the sheet TRANS. TUBE RATINGS vs FREQUENCY



THE PLANE THROUGH THE TUBE AXIS AND CENTER OF GRID CAP MAY VARY FROM THE PLANE THROUGH THE TUBE AXIS AND CENTER OF BAYONET PIN BY AN ANGULAR TOLERANCE (MEASURED ABOUT THE TUBE AXIS) OF 10° .

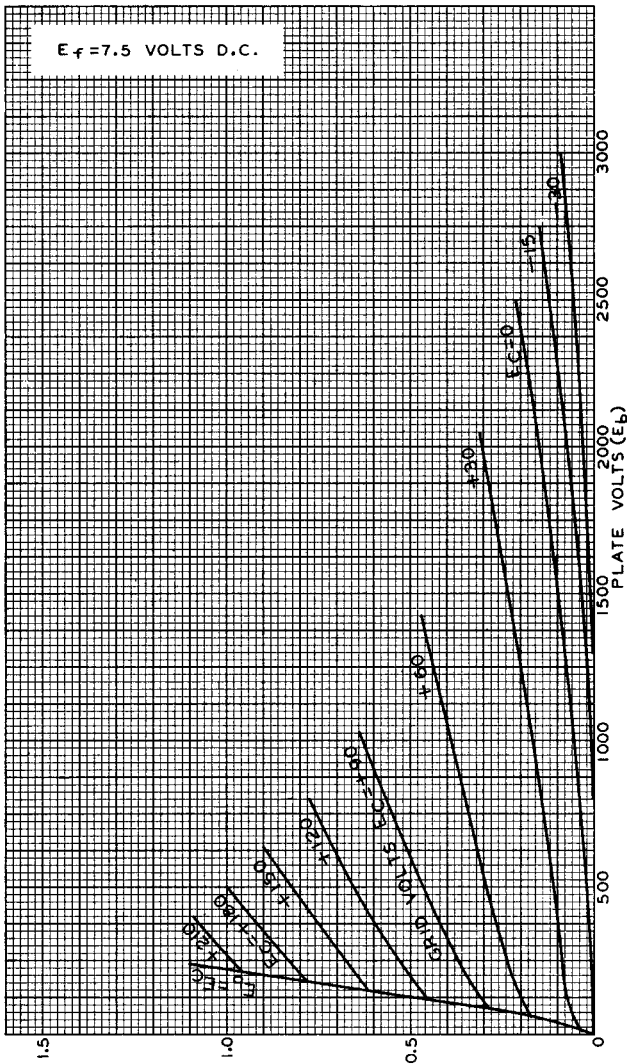
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AVERAGE PLATE CHARACTERISTICS





TYPICAL CHARACTERISTICS

