834

# R-F POWER AMPLIFIER

| | | |
|---|---|---|
| Filament | Thoriated Tungsten | |
| Voltage | 7.5 | a-c or d-c volts |
| Current | 3.1 | amp. |
| Amplification Factor | 10.5 | |
| Direct Interelectrode Capacitances: | | |
| Grid to Plate | 2.6 | μμf |
| Grid to Filament | 2.2 | μμf |
| Plate to Filament | 0.6 | μμf |
| Maximum Overall Length | | 6-7/8" |
| Maximum Diameter | | 2-11/16" |
| Bulb | | S-21 |
| Base | | Medium 4-Pin, Bayonet |
| RCA Socket (Type UR-542A) | | Stock No.9919 |

Cooling- Forced air from fan directed at middle and upper portions of bulb is recommended for all classes of service above 60 Mc.

*Maximum Ratings Are Absolute Values*

## MAXIMUM RATINGS and TYPICAL OPERATING CONDITIONS

### R-F POWER AMPLIFIER - Class B Telephony

*Carrier conditions per tube for use with a max. modulation factor of 1.0*

| | | | | |
|---|---|---|---|---|
| D-C Plate Voltage | | | 1250 max. | volts |
| D-C Plate Current | | | 100 max. | ma. |
| Plate Input | | | 75 max. | watts |
| Plate Dissipation | | | 50 max. | watts |
| Typical Operation: | | | | |
| D-C Plate Voltage | 750 | 1000 | 1250 | volts |
| D-C Grid Voltage # | -70 | -90 | -115 | volts |
| Peak R-F Grid Voltage | 90 | 100 | 115 | volts |
| D-C Plate Current | 50 | 50 | 50 | ma. |
| D-C Grid Current ** | 1.0 | 0.5 | 0 | approx. ma. |
| Driving Power ° ** | 3.3 | 3.1 | 3.0 | approx. watts |
| Power Output | 11 | 16 | 20 | approx. watts |

### PLATE-MODULATED R-F POWER AMPLIFIER - Class C Telephony

*Carrier conditions per tube for use with a max. modulation factor of 1.0*

| | | | | |
|---|---|---|---|---|
| D-C Plate Voltage | | | 1000 max. | volts |
| D-C Grid Voltage | | | -400 max. | volts |
| D-C Plate Current | | | 100 max. | ma. |
| D-C Grid Current | | | 20 max. | ma. |
| Plate Input | | | 100 max. | watts |
| Plate Dissipation | | | 35 max. | watts |
| Typical Operation: | | | | |
| D-C Plate Voltage | | 750 | 1000 | volts |
| D-C Grid Voltage * | | 14500 | 17700 | ohms |
| | | -290 | -310 | volts |
| Peak R-F Grid Voltage | | 415 | 435 | volts |
| D-C Plate Current | | 90 | 90 | ma. |
| D-C Grid Current ** | | 20 | 17.5 | approx. ma. |
| Driving Power ** | | 7.5 | 6.5 | approx. watts |
| Power Output | | 42 | 58 | approx. watts |

* Obtained by grid-leak resistor or by partial self-bias methods.
° At crest of a-f cycle with modulation factor of 1.0.
**, #: See next page.

← Indicates a change.



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# R-F POWER AMPLIFIER

(continued from preceding page)

## R-F POWER AMPLIFIER & OSCILLATOR – Class C Telegraphy

*Key-down conditions per tube without modulation##*

| | | | | | |
|---|---|---|---|---|---|
| D-C Plate Voltage | | | 1250 | max. | volts |
| D-C Grid Voltage | | | -400 | max. | volts |
| D-C Plate Current | | | 100 | max. | ma. |
| D-C Grid Current | | | 20 | max. | ma. |
| Plate Input | | | 125 | max. | watts |
| Plate Dissipation | | | 50 | max. | watts |
| → Typical Operation: | | | | | |
| D-C Plate Voltage | 750 | 1000 | 1250 | | volts |
| D-C Grid Voltage † | -175 | -200 | -225 | | volts |
| | 8750 | 11400 | 15000 | | ohms |
| | 1600 | 1850 | 2150 | | ohms |
| Peak R-F Grid Voltage | 300 | 325 | 350 | | volts |
| D-C Plate Current | 90 | 90 | 90 | | ma. |
| D-C Grid Current ** | 20 | 17.5 | 15 | approx. | ma. |
| Driving Power ** | 5.5 | 5.0 | 4.5 | approx. | watts |
| Power Output | 42 | 58 | 75 | approx. | watts |

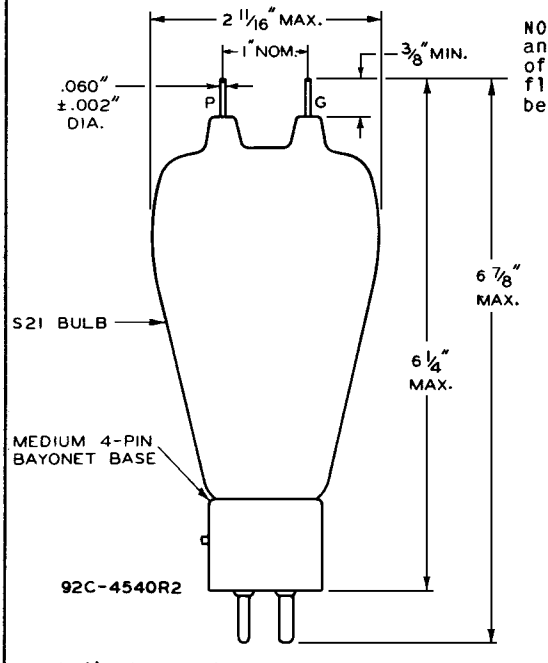
\# For a-c filament supply. If d.c. is used, the stated voltage values should be decreased by approx. one-half of the rated filament voltage.

† Obtained from fixed supply, by grid resistor (8750, 11400, 15000), or cathode resistor (1600, 1850, 2150).

## Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier conditions.

** Subject to wide variations as explained on sheet TRANS. TUBE RATINGS.

Data on operating frequencies for the 834 are given on the sheet TRANS. TUBE RATINGS vs FREQUENCY. See also "Cooling" under this type.

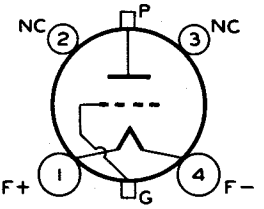



NOTE: Connections to tips P and G should be made by means of radiating connectors to which flexible circuit leads should be clamped.

TUBE MOUNTING POSITION

VERTICAL: Base down.
HORIZONTAL: No.

BOTTOM VIEW OF SOCKET CONNECTIONS




Pin 1 – Filament +
Pin 2 – No Connection
Pin 3 – No Connection
Pin 4 – Filament –
P – Plate
G – Grid

→ Indicates a change.



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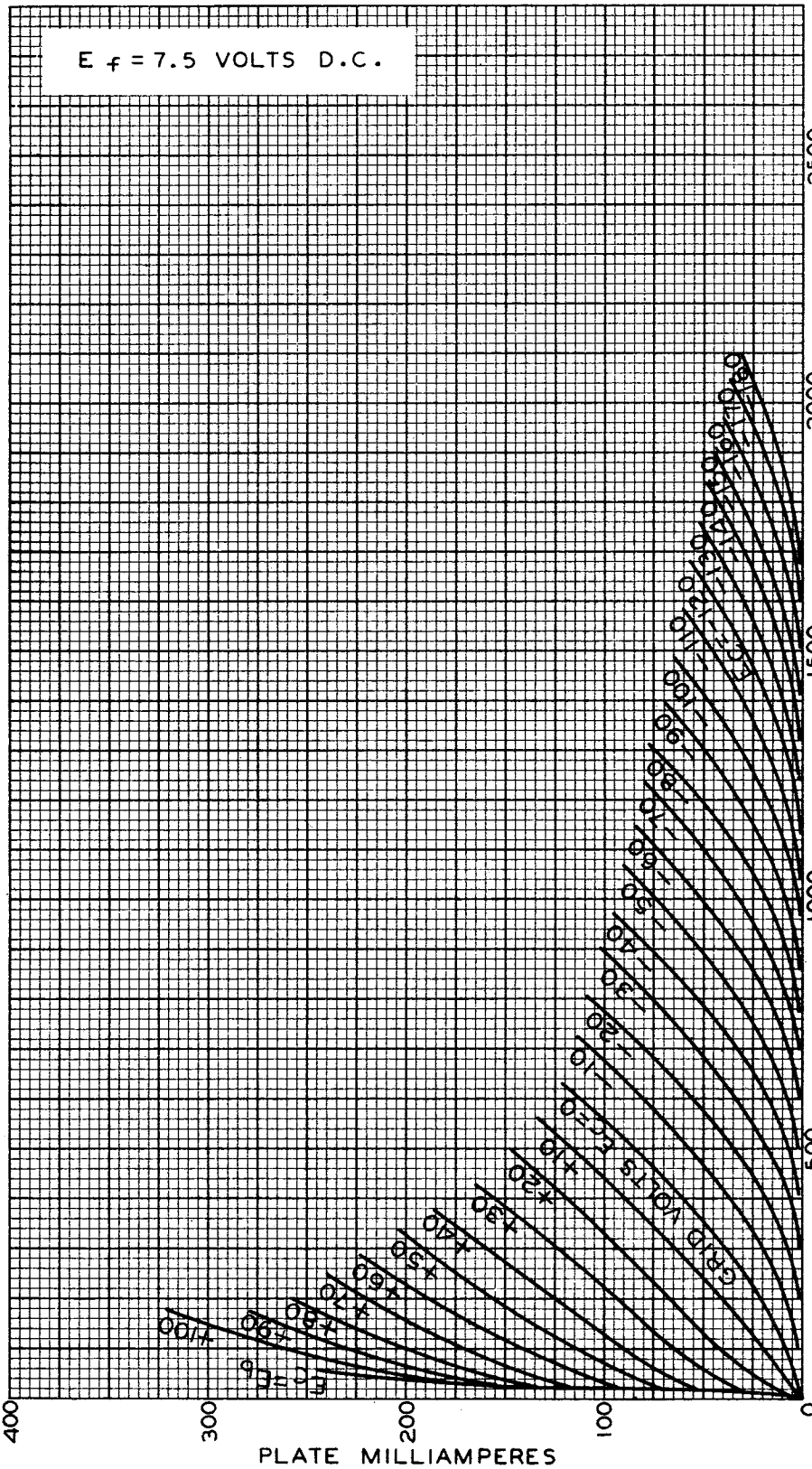
## AVERAGE PLATE CHARACTERISTICS

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