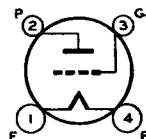


# RCA-31

## POWER AMPLIFIER

The 31 is a power-amplifier tube of the three-electrode type for battery-operated radio receivers where economy of filament-current drain is important.



### CHARACTERISTICS

|                            |       |                    |
|----------------------------|-------|--------------------|
| FILAMENT VOLTAGE (D. C.)   | 2.0   | Volts              |
| FILAMENT CURRENT           | 0.130 | Ampere             |
| PLATE VOLTAGE              | 135   | 180 max. Volts     |
| GRID VOLTAGE               | -22.5 | -30 Volts          |
| PLATE CURRENT              | 8.0   | 12.3 Milliamperes  |
| PLATE RESISTANCE           | 4100  | 3600 Ohms          |
| AMPLIFICATION FACTOR       | 3.8   | 3.8                |
| TRANSCONDUCTANCE           | 925   | 1050 Micromhos     |
| LOAD RESISTANCE            | 7000  | 5700 Ohms          |
| SELF-BIAS RESISTOR         | 2815  | 2440 Ohms          |
| UNDISTORTED POWER OUTPUT   | 0.185 | 0.375 Watt         |
| GRID-PLATE CAPACITANCE     |       | 5.7 $\mu\text{mf}$ |
| GRID-FILAMENT CAPACITANCE  |       | 3.5 $\mu\text{mf}$ |
| PLATE-FILAMENT CAPACITANCE |       | 2.7 $\mu\text{mf}$ |
| BULB                       |       | ST-12              |
| BASE                       |       | Small 4-Pin        |

### INSTALLATION

Refer to INSTALLATION on type 30.

### APPLICATION

As a power amplifier, the 31 should be operated as shown under CHARACTERISTICS. Grid voltage may be obtained from a C-battery, or by means of a self-bias resistor connected in the negative plate-return lead. The latter method is required where a grid resistor (maximum value 1 megohm) is used. If more output is desired than can be obtained from a single 31, two 31's may be operated either in parallel or push-pull connection.

