**R-K 11**

**RAYTHEON AMATEUR TUBES**

**TRIODE POWER AMPLIFIER OSCILLATOR**

The R-K 11 is a triode type power amplifier tube having a thoriated tungsten filament, and an isolating base. It is designed for use as a power amplifier, oscillator or frequency multiplier.

**AMPLIFICATION FACTOR** 20

**FILAMENT RATING**

- Filament Voltage: 6.3 volts
- Filament Current: 3.0 amp

**DIRECT INTERELECTRODE CAPACITANCES**

- Grid to Plate: 7 μf
- Input: 7 μf
- Output: 0.9 μf

**R-F POWER AMPLIFIER OR OSCILLATOR—CLASS C—TELEGRAPHY**

**MAXIMUM RATING**

- D-C Plate Voltage: 750 volts
- D-C Plate Current (Carrier): 105 ma
- D-C Grid Voltage: 35 ma
- Plate Dissipation: 25 watts

**TYPICAL OPERATION**

- D-C Plate Voltage: 500 volts
- D-C Grid Voltage: -100 volts
- D-C Plate Current: 100 ma
- D-C Grid Current: 21 ma
- Peak R-F Input Voltage: 165 volts
- R-F Driving Power: 3.1 watts
- Power Output: 35 watts

**R-F POWER AMPLIFIER—CLASS B—TELEGRAPHY**

**MAXIMUM RATING**

- D-C Plate Voltage: 750 volts
- D-C Plate Current (Carrier): 50 ma
- Plate Dissipation (Carrier): 25 watts

**TYPICAL OPERATION**

- D-C Plate Voltage: 750 volts
- D-C Grid Voltage: -40 volts
- D-C Plate Current: 44 ma
- D-C Grid Current: 1 ma
- Peak R-F Input Voltage: 110 volts
- R-F Driving Power: 2 watts
- Carrier Power Output: 12 watts
- Peak Power Output: 48 watts

*At the peak of the a-f cycle with 100% modulation.

**OPERATING NOTES**

**FREQUENCY RANGE**

The construction of the R-K 11 allows operation at the maximum ratings at frequencies up to 60 megacycles. Above 60 megacycles the reduced efficiency realized requires that the plate voltage be lowered to prevent the plate dissipation from exceeding the maximum rated value.

**BIAS**

A fixed bias voltage of at least 30 volts should be used with a plate voltage of 750 volts in order to protect the tube in case of failure of bias or excitation. The fixed bias may be reduced with lower plate voltage.

**PLATE TEMPERATURE**

The plate of the R-K 11 will not show color when operated at the maximum rated plate dissipation. Dissipation above the rated value should be avoided.