TRIODE POWER AMPLIFIER OSCILLATOR

The RK-18 is a triode type power amplifier tube having a thoriated tungsten filament, a molybdenum plate and an isolatite base. It is designed for use as a power amplifier, oscillator or frequency multiplier.

FILAMENT RATING
- Filament Voltage: 7.5 volts
- Filament Current: 3 amp

DIRECT INTERELECTRODE CAPACITANCES
- Grid to Plate: 4.8 μf
- Input: 6 μf
- Output: 1.8 μf

R-F POWER AMPLIFIER OR OSCILLATOR—CLASS C

MAXIMUM RATINGS
- D-C Plate Voltage—Telephony: 1250 volts
- D-C Grid Voltage: 1250 volts
- With Grid Modulation: 1000 volts
- D-C Plate Current: 100 ma
- D-C Grid Current: 40 ma
- R-F Grid Current: 5 amp
- Plate Dissipation: 40 watts

TYPICAL OPERATION

<table>
<thead>
<tr>
<th>Operation</th>
<th>Grid Voltage</th>
<th>Plate Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-C Plate Voltage</td>
<td>140</td>
<td>50</td>
</tr>
<tr>
<td>Peak R-F Input</td>
<td>150</td>
<td>70</td>
</tr>
<tr>
<td>Power Output</td>
<td>18</td>
<td>40</td>
</tr>
<tr>
<td>Peak A-F Voltage</td>
<td>60</td>
<td>—</td>
</tr>
<tr>
<td>Peak Power Output</td>
<td>12</td>
<td>25</td>
</tr>
</tbody>
</table>

AVERAGE PLATE CHARACTERISTICS

- E₂ = 3.75V AC
- E₂p = 1250V DC
- E₂p = 60V DC

AVERAGE CHARACTERISTICS

- R-F POWER AMPLIFIER—CLASS B—TELEPHONY

<table>
<thead>
<tr>
<th>Operation</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-C Plate Voltage</td>
<td>1250</td>
</tr>
<tr>
<td>Plate Dissipation</td>
<td>40</td>
</tr>
</tbody>
</table>

TYPICAL OPERATION

| D-C Plate Voltage  | 1250  |
| Plate Current      | 50    |
| Plate Dissipation  | 40    |

A-F POWER AMPLIFIER—CLASS B—TWO TUBES

MAXIMUM RATINGS
- D-C Plate Voltage: 1250 volts
- D-C Grid Current: 115 ma
- Plate Dissipation (per tube): 40 watts

TYPICAL OPERATION

- D-C Plate Voltage: 1000 volts
- D-C Grid Current: 45 ma
- Peak A-F Input Voltage: 260 volts
- A-F Driving Power: 4.3 watts

OPERATING NOTES

- The RK-18 may be operated 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: At least 60 volts of fixed bias should be used with 1250 volts on the plate to protect the tube in case of failure of the bias or excitation.
- PLATE TEMPERATURE: The RK-18 will show a light cherry color (See Plate Temperature Color Scale) when operated at the maximum rated plate dissipation. Dissipations above the rated value should be avoided.