**EITEL-McCULLOUGH, INC.**
**SAN BRUNO, CALIFORNIA**

**GENERAL CHARACTERISTICS**

**Electrical**
- Filament: Thoriated tungsten
- Voltage: \(5.0\) volts
- Current: \(10.5\) amperes
- Amplification Factor (Average): \(37\)
- Direct Interelectrode Capacitances (Average)
  - Grid-Plate: \(2.9\) uuf
  - Grid-Filament: \(5.0\) uuf
  - Plate-Filament: \(0.7\) uuf
- Transconductance (\(I_a=300\) ma., \(E_u=3000\), \(e_u=-20\)): \(6650\) umhos
- Frequency for Maximum Ratings: \(40\) mc.

**Mechanical**
- Base: \(4\) pin, No. 5001B
- Basing: RMA type 2N
- Maximum Overall Dimensions:
  - Length: \(10.125\) inches
  - Diameter: \(3.813\) inches
- Net weight: \(12\) ounces
- Shipping weight (Average): \(2.25\) pounds

**Audio Frequency Power Amplifier and Modulator**

**Class B**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Typical Operation—2 Tubes</th>
<th>Max. Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-C Plate Voltage</td>
<td></td>
<td>3000 volts</td>
</tr>
<tr>
<td>Max.-Signal D-C Plate Current, per tube</td>
<td>1500</td>
<td>350 ma.</td>
</tr>
<tr>
<td>Plate Dissipation, per tube</td>
<td>2000</td>
<td>250 watts</td>
</tr>
<tr>
<td>D-C Grid Voltage (approx.)</td>
<td></td>
<td>volts</td>
</tr>
<tr>
<td>Peak A-F Grid Input Voltage</td>
<td>410</td>
<td>volts</td>
</tr>
<tr>
<td>Zero-Signal D-C Plate Current</td>
<td>0</td>
<td>460 ma.</td>
</tr>
<tr>
<td>Max.-Signal D-C Plate Current</td>
<td>220</td>
<td>560 ma.</td>
</tr>
<tr>
<td>Max.-Signal Driving Power (approx.)</td>
<td>36</td>
<td>24 watts</td>
</tr>
<tr>
<td>Effective Load, Plate-to-Plate</td>
<td>4300</td>
<td>12250 ohms</td>
</tr>
<tr>
<td>Max.-Signal Plate Power Output</td>
<td>650</td>
<td>watts</td>
</tr>
</tbody>
</table>

*Averaged over one sinusoidal audio frequency cycle.

**Radio Frequency Power Amplifier and Oscillator**

**Class-C *Telegraphy**

(Key down conditions without modulation)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Typical Operation—1 Tube</th>
<th>Max. Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-C Plate Voltage</td>
<td></td>
<td>4000 volts</td>
</tr>
<tr>
<td>D-C Plate Current</td>
<td>2000</td>
<td>350 ma.</td>
</tr>
<tr>
<td>D-C Grid Current</td>
<td>357</td>
<td>100 ma.</td>
</tr>
<tr>
<td>D-C Grid Voltage</td>
<td>94</td>
<td>volts</td>
</tr>
<tr>
<td>Plate Power Output</td>
<td>-100</td>
<td>volts</td>
</tr>
<tr>
<td>Plate Input</td>
<td>464</td>
<td>watts</td>
</tr>
<tr>
<td>Plate Dissipation</td>
<td>714</td>
<td>watts</td>
</tr>
<tr>
<td>Plate Dissipation, Grid Input Voltage</td>
<td>250</td>
<td>watts</td>
</tr>
<tr>
<td>Peak R. F. Grid Input Voltage, (approx.)</td>
<td>345</td>
<td>volts</td>
</tr>
<tr>
<td>Driving Power, (approx.)</td>
<td>29</td>
<td>watts</td>
</tr>
</tbody>
</table>

*The above figures show actual measured tube performance, and do not allow for variations in circuit losses.

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DRIVING POWER vs. POWER OUTPUT

The three charts on this page show the relationship of plate efficiency, power output and grid driving power at plate voltages of 2000, 3000, and 4000 volts. These charts show combined grid and bias losses only. The driving power and power output figures do not include circuit losses. Points A, B, and C are identical to the typical Class C operating conditions shown on the first page under 2000, 3000, and 4000 volts respectively.
PLATE (4002C)

5\( \frac{15}{16} \) ± \( \frac{1}{4} \)

GRID

.068 ± 003

5\( \frac{1}{16} \) MIN.

\( 3 \frac{13}{16} \) MAX.

9\( \frac{5}{8} \) ± \( \frac{1}{4} \)

9\( \frac{7}{8} \) ± \( \frac{1}{4} \)

CAPS

PLATE
CAP NO. 4002C

SEE TUBE OUTLINE DRAWING

FILAMENT

N.C

BASE NO. 5001B

FILAMENT

N.C

BASE NO. 5001B

2IN

\( 2 \frac{2}{3} \) MAX

\( 1 \frac{64}{64} \) MAX

\( 1 \frac{64}{64} \) MIN

1.65

1.09 MAX

1.87 ± 002 DIA

4 PINS

"ON FINISHED TUBE ADD .050 FOR SOLDER"