TRIODE POWER AMPLIFIER

COATED FILAMENT
2.5 VOLTS 2.5 AMPERE
AC OR DC

GLASS BULB

MOUNTING POSITION

THIS TUBE SHOULD BE MOUNTED VERTICALLY. HOWEVER HORIZONTAL OPERATION IS PERMISSIBLE IF PIN 1 AND 4 ARE IN A HORIZONTAL PLANE.

THE 2A3 IS A FILAMENT TYPE TRIODE POWER AMPLIFIER. IT IS DESIGNED FOR SERVICE IN THE OUTPUT STAGE OF AUDIO AMPLIFIERS WHERE HIGH OUTPUT AND LOW HARMONIC DISTORTION IS DESIRED.

RATINGS

INTERPRETED ACCORDING TO RMA STANDARD MS-210

MAXIMUM PLATE VOLTAGE
300 VOLTS

MAXIMUM PLATE DISSIPATION
15 WATTS

DIRECT INTERELECTRODE CAPACITANCES (APPROX.)

GRID TO PLATE
16.5 \(\mu\)F

INPUT
7.5 \(\mu\)F

OUTPUT
5.5 \(\mu\)F

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A\(_2\) AMPLIFIER

SINGLE TUBE

PLATE VOLTAGE
250 VOLTS

GRID VOLTAGE, (MEASURED FROM MID-POINT OF AC OPERATED FILAMENT)
-45 VOLTS

MAXIMUM GRID CIRCUIT RESISTANCE
FIXED BIAS
0.05 MEGOHM

SELF BIAS
0.5 MEGOHM

PLATE CURRENT
60 MA.

PLATE RESISTANCE
800 OHMS

TRANSCONDUCTANCE
5 250 \(\mu\)Mhos

AMPLIFICATION FACTOR
4.2

LOAD RESISTANCE
2 500 OHMS

POWER OUTPUT
3.5 WATTS

SECOND HARMONIC DISTORTION
5.0 PER CENT

CONTINUED ON NEXT PAGE
### Class AB1 Amplifier — Push-Pull

Values are for two tubes.

<table>
<thead>
<tr>
<th></th>
<th>Fixed BIAS</th>
<th>Self BIAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate Voltage</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>Grid Voltage A</td>
<td>-62</td>
<td>-</td>
</tr>
<tr>
<td>Cathode bias Resistor</td>
<td>-</td>
<td>780</td>
</tr>
<tr>
<td>Zero-signal plate current</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Load Resistance</td>
<td>750</td>
<td>1250</td>
</tr>
<tr>
<td>Effective Load Resistance</td>
<td>3000</td>
<td>5000</td>
</tr>
<tr>
<td>(Per Tube)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Plate to Plate)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Harmonic Distortion</td>
<td>2.5</td>
<td>5.0</td>
</tr>
<tr>
<td>Power Output</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Watts</td>
<td>Watts</td>
</tr>
</tbody>
</table>

*Grid voltage measured from mid-point of ac operated filament. The total effective grid circuit resistance should be kept at a minimum. Under fixed bias conditions it should never exceed 20,000 Ohms while with self bias it should never exceed 0.5 megohm.*
2A3

$E_f = 2.5 \text{ V.}$
$E_b = 250 \text{ V.}$
$E_c = -45 \text{ V.}$
$R_L = 2500 \text{ ohms}$

- Plate current ($I_b$)
- Harmonic distortion in per cent
- Signal volts RMS

Power output ($P_o$) in Watts vs. Signal volts RMS and Harmonic distortion.