The Triadyn25AC5G is a positive grid Power Amplifier Triode designed particularly for Dynamic-Coupled Class A operation, similar to the 6AC5G. This new output tube requires a 25 volt heater potential and its 0.3 ampere heater permits its use in series heater circuits commonly employed in ac-dc receivers.

In 110 volt ac-dc receivers a low mu drive is required to provide positive grid bias and to center the plate current at the nominal value of 45 mA. This necessitated the design of a new drive, the 6AE5G. This combination provides 2 watts of power output. As usual with Dynamic-Coupled amplifiers, the positive bias for the output tube and the negative bias for the driver are automatically provided by the circuit. A high value of resistance is permitted in the grid circuit of the driver, allowing the plate of the first audio to operate into a lightly loaded circuit. Since this coupling resistor is connected to the input driver rather than the output tube, grid current trouble, often encountered with other ac-dc power output tubes, is eliminated. For typical ac-dc receivers, a 6Q7G should be used for the detector and first audio with a 0.25 meg. plate resistor and 1.05 volts bias.

The 25AC5G may also be operated at 180 plate volts. The tube offers an excellent solution to the tube compliment problem in low voltage ac receivers when it is economically feasible to operate the heaters in series and to use a small inexpensive transformer for the plate supply. A type 6P5G (octal base equivalent of a 76) may be used as the driver. This combination delivers 2 watts of power output. If more power is desired, a type 37 driver may be used, providing 2.7 watts.

The simple construction and conservative tube element spacing of the 25AC5G insures against life problems and failures in the field. The tube offers a most inexpensive manner of increasing the number of tubes in a receiver. This is obvious because of the inherent low cost of both the driver and output tubes and the absence of circuit components.

### 25AC5G RATING - TYPICAL OPERATION

**CLASS A DYNAMIC-COUPLED POWER AMPLIFIER**

<table>
<thead>
<tr>
<th>Driver Tube</th>
<th>6AE5G</th>
<th>6P5G</th>
<th>37</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate-Supply Voltage</td>
<td>110</td>
<td>180</td>
<td>180</td>
<td>Volts</td>
</tr>
<tr>
<td>Grid Voltage</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>Volts</td>
</tr>
<tr>
<td>Power Tube Plate Current</td>
<td>45</td>
<td>27</td>
<td>37</td>
<td>Ma.</td>
</tr>
<tr>
<td>Driver Plate Current</td>
<td>7</td>
<td>4</td>
<td>5.3</td>
<td>Ma.</td>
</tr>
<tr>
<td>Input Signal To Driver**</td>
<td>22</td>
<td>12</td>
<td>17</td>
<td>Volts rms</td>
</tr>
<tr>
<td>Load Resistance</td>
<td>2,000</td>
<td>8,000</td>
<td>5,000</td>
<td>Ohms</td>
</tr>
<tr>
<td>Harmonic Distortion</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>%</td>
</tr>
<tr>
<td>Power Output 2.0</td>
<td>2.0</td>
<td>2.7</td>
<td>Watts</td>
<td></td>
</tr>
</tbody>
</table>

*Bias voltage for both the 25AC5G and the driver is automatically developed by the Dynamic-Coupled connection.

**Driver grid current does not flow during any part of the input cycle. The total resistance in the driver grid circuit should not exceed one megohm.

We do not assume responsibility for any possible patent liability involved by the use of circuits described above.
25AC5G RATING (continued)
HIGH-MU POWER AMPLIFIER TRIODE
(For Dynamic-Coupled Amplifiers)

HEATER
Voltage  25.0
Current  0.3

PLATE
Voltage  180
Dissipation  10

Coated Unipotential Cathode
Volts ac-dc
Amperes

Max. Volts
Max. Watts

STATIC AND DYNAMIC CHARACTERISTICS

Plate Voltage  110
Grid Voltage  +15
Amplification Factor  53
Plate Resistance  15,200
Transconductance  3,800
Plate Current  45
Grid Current  7

Volts
Volts
Ohms
Umhos
Milliamperes
Milliamperes

BASE CONNECTIONS

Pin 1 - No Connection
Pin 2 - Heater
Pin 3 - Plate
Pin 5 - Grid
Pin 7 - Heater
Pin 8 - Cathode

MAX. OVERALL LENGTH  4-15/32"
MAX. DIAMETER  1-9/16"
Bulb  ST12
Base  Small Octal 6 Pin

6AE5G TRIODE AMPLIFIER DATA

HEATER
Voltage  6.3
Current  0.3

Coated Unipotential Cathode
Volts ac-dc
Amperes

AMPLIFIER CLASS A

Plate  95
Grid  -15
Amplification Factor  4.2
Plate Resistance  3,500
Transconductance  1,200
Plate Current  7

Volts
Volts
Ohms
Umhos
Milliamperes

BASE CONNECTIONS

Pin 1 - No Connection
Pin 2 - Heater
Pin 3 - Plate
Pin 5 - Grid
Pin 7 - Heater
Pin 8 - Cathode

Max. Overall Length  4-1/8"
Max. Diameter  1-9/16"
Bulb  ST12
Base  Small Octal 6 Pin