ES833

RADIATION COOLED TRIODE

GENERAL.
The ES833 is a high mu triode particularly suitable for use as an R.F. Power Amplifier, Oscillator or Class B modulator.

The anode and grid connections are brought out at the top and are taken through metal to glass seals to heavy current terminals. As a result of this construction the valve is exceptionally efficient at higher radio frequencies and may be operated under Class 'C' CW conditions at a maximum input of 1.8 kW at frequencies up to 30Mc/s, with forced air cooling. At reduced input rating it is possible to operate the valve as high as 75Mc/s.

RATING

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filament Voltage (volts)</td>
<td>10.0</td>
</tr>
<tr>
<td>Filament Current (amps)</td>
<td>1.0</td>
</tr>
<tr>
<td>Maximum Anode Voltage (volts)</td>
<td>V_a(max)</td>
</tr>
<tr>
<td>Maximum Anode Dissipation (watts)</td>
<td>W_a(max)</td>
</tr>
<tr>
<td>Amplification Factor</td>
<td>35</td>
</tr>
<tr>
<td>Maximum Operating Frequency at Full Rating</td>
<td>$ 30 Mc/s</td>
</tr>
</tbody>
</table>

- The Maximum Anode Voltage may be increased to 4,000v, and the Anode dissipation to 400w providing the valve is forced-air cooled at a rate of 40 cu.ft/min., on top of bulb between anode and grid seals, directed through a 2" nozzle.

- At higher frequencies the maximum permissible anode voltages and inputs must be reduced.

INTER-ELECTRODE CAPACITANCES

<table>
<thead>
<tr>
<th>Component</th>
<th>Value (µF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anode/Grid</td>
<td>C_a-g1</td>
</tr>
<tr>
<td>Anode/Filament</td>
<td>C_a-f</td>
</tr>
<tr>
<td>Grid/Filament</td>
<td>C_g-f</td>
</tr>
</tbody>
</table>

DIMENSIONS

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Overall Length</td>
<td>8.812 in</td>
</tr>
<tr>
<td>Maximum Diameter</td>
<td>4.594 in</td>
</tr>
<tr>
<td>Approximate Nett Weight (lbs)</td>
<td>1</td>
</tr>
<tr>
<td>Approximate Packed Weight (lbs)</td>
<td>34</td>
</tr>
</tbody>
</table>

MOUNTING POSITION - Vertical

December, 1961

Associated Electrical Industries Limited

Electronic Components Division

Tel.: GERRARD 9797
ES833

RADIATION COOLED TRIODE

- Grid Terminal
- Anode Terminal
- Min. Straight Side
- Max. Straight Side
- Filament Terminal
- Plane of Electrodes

Dimensions:
- 8 3/8 ± 3/16
- 1.3 ± 1/32
- 22 ± 3/32
- 375 ± 0.005
- 0.4375 ± 0.005
- 4.19 ± 0.32

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RADIATION COOLED TRIODE

AVERAGE CHARACTERISTIC CURVES: $I_g/V_a$

- $V_a = 500V$
- $V_a = 300V$
- $V_a = 250V$
- $V_a = 200V$
- $V_a = 150V$
- $V_a = 100V$

GRID CURRENT (A)

ANODE VOLTAGE (V)