ADVANCE DATA

MECHANICAL DATA
Bulb T-6⅛
Base E9-1, Miniature Button 9-Pin
Outline 6-2
Basing 9AJ
Cathode Coated Unipotential
Mounting Position Any

ELECTRICAL DATA

HEATER CHARACTERISTICS AND RATINGS
Average Characteristics

<table>
<thead>
<tr>
<th>Parallel Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heater Voltage 1</td>
</tr>
<tr>
<td>Heater Current</td>
</tr>
</tbody>
</table>

Ratings (Design Maximum Values)

<table>
<thead>
<tr>
<th>Min.-Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heater Voltage 2</td>
</tr>
</tbody>
</table>

Maximum Heater-Cathode Voltage

<table>
<thead>
<tr>
<th>DC and Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 Volts</td>
</tr>
<tr>
<td>100 Volts</td>
</tr>
</tbody>
</table>

DIRECT INTERELECTRODE CAPACITANCES (Each Section)

<table>
<thead>
<tr>
<th>Shielded</th>
<th>Unshielded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid to Plate</td>
<td>1.4</td>
</tr>
<tr>
<td>Input: g to (h-k)</td>
<td>3.3</td>
</tr>
<tr>
<td>Output: p to (h-k)</td>
<td>2.5</td>
</tr>
<tr>
<td>Grid to Grid (Max.)</td>
<td>0.005</td>
</tr>
<tr>
<td>Plate to Plate (Max.)</td>
<td>0.015</td>
</tr>
</tbody>
</table>

RATINGS (Design Maximum Values)

Continuous Class C Service at 175 Mc

<table>
<thead>
<tr>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 Volts</td>
</tr>
<tr>
<td>3.5 Watts</td>
</tr>
<tr>
<td>7.0 Watts</td>
</tr>
<tr>
<td>5.5 Watts</td>
</tr>
<tr>
<td>30 mAdc</td>
</tr>
<tr>
<td>2.5 mAdc</td>
</tr>
<tr>
<td>75 Volts</td>
</tr>
<tr>
<td>0.1 Megohm</td>
</tr>
<tr>
<td>0.5 Megohm</td>
</tr>
</tbody>
</table>

QUICK REFERENCE DATA

The Sylvania Type 8431 is a T-6⅛ medium mu double triode designed for Continuous Class C Amplifier Service in the 200 megacycle range.

The rating values apply specifically to Sonobuoy and other battery applications where considerations of power output are paramount, and considerations of long life are of lesser importance.

SYLVANIA ELECTRONIC TUBES
A Division of Sylvania Electric Products Inc.
RECEIVING TUBE OPERATIONS
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February 7, 1963
Page 1 of 7
CHARACTERISTICS AND TYPICAL OPERATION

Class A1 Amplifier

Plate Voltage
Grid Voltage
Plate Current
Transconductance
Amplification Factor

90 Volts
-1.3 Volts
15 Ma
12,500 μmhos
33

Class C RF Frequency Multiplier

Doubler to 175 Mc

Plate Voltage
For Grid Voltage
Use Grid Resistor
Peak RF Grid Voltage
Grid Current
Plate Current
Power Output5 (Approx.)

160 Volts
-70 Volts
33,000 Ohms
77 Volts
2.5 Ma
26 Ma
1.0 Watt

NOTES:

1. For parallel operation of heaters, equipment should be designed that at normal supply voltage bogey tubes will operate at this value of heater voltage.

2. Heater voltage supply variations shall be restricted to maintain heater voltage within the specified values.

3. Shield No. 315.

4. The rating values apply specifically to Sonobuoy and other battery applications where considerations of power output are paramount, and considerations of long life are of lesser importance.

5. These values are for useful power and are as measured at the load of the output circuit.

6. To insure satisfactory operation in Sonobuoy applications Type 8431 is subjected to and must successfully pass an impact acceleration test at an acceleration level of 500 G.
AVERAGE PLATE CHARACTERISTICS
AVERAGE PLATE CHARACTERISTICS
AVERAGE TRANSFER CHARACTERISTICS

$E_f = \text{RATED VALUE}$
AVERAGE TRANSFER CHARACTERISTICS

Grid Voltage vs. Plate Resistance vs. Transconductance

$E_0 = \text{RATED VALUE}$
$E_0 = 90 \text{ VOLTS}$

AVERAGE TRANSFER CHARACTERISTICS

Grid Voltage vs. Plate Resistance vs. Transconductance

$E_0 = \text{RATED VALUE}$
$E_0 = 150 \text{ VOLTS}$