DESCRIPTION

The 6280/168* is a planar type triode designed for use as an amplifier or frequency multiplier at frequencies in the order of 4000 megacycles.

CHARACTERISTICS

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heater Voltage</td>
<td>6.3 volts</td>
</tr>
<tr>
<td>Plate Voltage</td>
<td>200 volts</td>
</tr>
<tr>
<td>Frequency</td>
<td>4000 megacycles</td>
</tr>
<tr>
<td>Gain (50 milliwatts output)</td>
<td>9 decibels</td>
</tr>
<tr>
<td>Bandwidth (3 db down)</td>
<td>100 megacycles</td>
</tr>
</tbody>
</table>

FILE: MICROWAVE SECTION
ISSUE 1, 5-53

from RTMA release #1187, May 8, 1953
GENERAL CHARACTERISTICS

ELECTRICAL DATA

- Heater Voltage: 6.3 volts
- Amplification Factor: 1.13 amperes
- Transconductance (I_b = 30 ma): 50000 micromhos
- Grid to Plate Capacitance: 1.25, 1.45, 1.60 uf
- Grid to Shell Capacitance (E_f=6.1 v; E_b=0 v): 8.5, 11.2, 17.0 uf
- Plate to Shell Capacitance: 7.6, 8.7, 10.3 uf
- Cathode to Shell: 0.019, 0.050 uf

MECHANICAL DATA

- Cathode: Unipotential
- Mounting Position: Any
- Weight, Approximate: 1 ounce
- Socket: (Equivalent to or) KS14134

MAXIMUM RATINGS, ABSOLUTE VALUES

- Plate Voltage: 270 volts
- Grid Voltage: [-15.0 volts, +1.5 volts]
- Plate Current: 33 milliamperes
- Grid Current: 15 milliamperes
- Plate Dissipation: 7.5 watts
- Plate Seal Temperature: 150° Centigrade
- Grid Seal Temperature: 100° Centigrade
- Heater-Cathode Voltage: 45 volts

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

- Plate Voltage: 200 volts
- Plate Current: 30 milliamperes
- Bias Circuit
  - Cathode Bias Resistor: 260 ohms
  - Grid Supply Voltage: 8 volts
- Frequency: 4000 megacycles
- Gain (50 Milliwatts Output): 9 decibels
- Gain (500 Milliwatts Output): 5 decibels
- Band Width (3 db Down): 100 megacycles

Note (3): For optimum life, heater may be supplied from a source of 10.8 ± 0.2 volts through a circuit resistance of 4.16 ohms.

Note (4): Cathode connected to shell through cathode to shell capacitance.

Note (5): With the .750"-40 thread screwed into a gauge having a thread with a .750"-40 class 1 fit, the .856", 1.070" and .180" diameters must fit in cylinders concentric with the .750"-40 thread and having diameters of .895" x .720" long; 1.135" x .157" long; and .210" x .375" long. Allowances for these tolerances must be made in any circuit design.