Manufacturer's Designation: BL-604
JETEC Designation: 6646
Manufacturer: Bomac Laboratories, Inc.
Beverly, Massachusetts

March 14, 1957

GENERAL CHARACTERISTICS

The 6646 is a dual broad-band gas switching tube designed to operate with a suitable short-slot hybrid junctions to provide a balanced duplexer using RG-52/U size waveguide. It is an integral cavity type with fixed tuned gaps. Its operational band is from 8490 to 9578 megacycles.

ELECTRICAL DATA-TYPICAL VALUES

Operational Band
- VSWR 1.4 maximum
- VSWR 1.2 maximum
- Ignitor Ignition Time (max.) 5 sec.
- Ignitor Voltage Drop li=100μA dc
  (each electrode) 200-375 volts
- Spike Leakage Energy (max.) 0.1 ergs
  F= 9000 Mc; po=40 kw; tp1=1.0μsec.
  tp2=0.5μsec; prr=1000pps;
  li=100μA dc on each electrode
- Flat Leakage Power (max.) 20 mw
  (see Spike Leakage for test conditions)
- Duplexer Loss (max.) and li=100μA dc on each electrode
  from 8490 to 9578 Mc. 1.2 db
  from 8565 to 9487 Mc. 1.0 db
- Isolation (min.)
  from 8490 to 9578 Mc. 14.0 db
  from 8565 to 9487 Mc. 16.0 db
  at 9000 Mc. 18.0 db
- Recovery Time (max.) at 100 kw peak 3 db down 1.5 μs
- High Level VSWR (max.) 1.2
  F= 9000 Mc; po=40 kw; tp=1.0μs;
  li=100μA dc on each electrode

from JETEC release #1919, May 6, 1957
MECHANICAL DATA-GENERAL

Mounting Position          Any
Number of Electrodes       Two
Weight, approximately      10 ounces

ABSOLUTE MAXIMUM RATINGS

Transmitter Peak Power     100kw
Transmitter Average Power  100W
Ignitor Current (each electrode)  200μAdc

OUTLINE DRAWINGS

Outline per attached drawing dated 6-29-56
Note 1: The rect. formed by the four mounting holes on each flange, dimensions (A) and (E) shall be centered on the flange face to within 1/32".

Note 2: Silver plate 100 MSI or equiv.

Note 3: Rhodium flash over silver plating is optional.

Note 4: Exhaust tube must not extend beyond flange more than 1/4".

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>#8-32NC-1 4 Holes</td>
</tr>
<tr>
<td>B#</td>
<td>2.170±.005</td>
</tr>
<tr>
<td>C</td>
<td>90° ±5°</td>
</tr>
<tr>
<td>D#</td>
<td>1.280±.004</td>
</tr>
<tr>
<td>E</td>
<td>#18(.1695) 4 Holes</td>
</tr>
<tr>
<td>F#</td>
<td>1 3/8 Max.</td>
</tr>
<tr>
<td>G**</td>
<td>0.083 Min.</td>
</tr>
<tr>
<td>H#</td>
<td>1.280±.004</td>
</tr>
<tr>
<td>J**</td>
<td>0.250 Dia.</td>
</tr>
<tr>
<td>K</td>
<td>1.555±.010</td>
</tr>
<tr>
<td>L**</td>
<td>0.083 Min.</td>
</tr>
<tr>
<td>M**</td>
<td>2.575±.015</td>
</tr>
<tr>
<td>N**</td>
<td>1.625±.015</td>
</tr>
<tr>
<td>P**</td>
<td>1/8 Rad.</td>
</tr>
<tr>
<td>Q#</td>
<td>2.170±.005</td>
</tr>
</tbody>
</table>

SPECIFICATION SHEET

Outline

6646/BL-604, 6334/BL-27

6-29-56 clr