BOMAC LABORATORIES, INC.  Beverly, Mass.  June 1, 1955

TYPE DESIGNATION REGISTRATION FORM

SHUTTER AND TR TUBE

Manufacturer: Bomic Laboratories, Inc.
Beverly, Massachusetts

Mfr's Type No.  BL-326

Tentative JETEC Type No. 6616

The Bomic 6616/BL-326 is a combined shutter and standard broad-band TR tube (type 1B63A) for use with RG-52/U size waveguide. The shutter mechanism consists of two electro-magnetically operated plungers which short the two fixed-tuned gaps inside the tube when the coils are not energized. When the shutter is closed, protection is provided for the receiver crystal when the radar set is not in use. When the shutter is open, the TR tube functions normally and provides decoupling of the receiver from a common transmitting and receiving antenna during a period of transmission. It is an integral cavity type with fixed tuned gaps. Its operational band is from 8490 Mc to 9578 Mc.

ELECTRICAL DATA - GENERAL

TR Tube  (With Shutters Open)

Operational Band
  VSWR 1.9 maximum
  VSWR 1.4 maximum

Ignitor Starting Voltage
Ignitor Voltage Drop at 100 μAdc of ignitor current
Spike Leakage Energy
  po=40 kw; prr=1000 pps;
  F=9000 Mc; tp1 = 1.0 μs;
  tp2 = 0.5 μs; li=100 μAdc
Flat Leakage Power
  0.3 erg max.

(See Spike Leakage for conditions.)
Insertion Loss at 9000 Mc and li=0
Ignitor Interaction at 9000 Mc and li=100μAdc
Recovery Time at 200 kw peak; 3 db down
  40 mw max.
  0.7 db max.
  0.2 db max.
  10 μs max.

from JETEC release #1487, June 27, 1955

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Shutter Tube

Attenuation 8490 Mc to 9578 Mc (shutters closed) 40 db min.
Shutter Circuit Voltage 17 Vdc (min.) 30 Vdc (max.)
Shutter Circuit Pull-In Current (min.) 78 mA dc
Shutter Circuit Holding Current (min.) 30 mA dc

MECHANICAL DATA - GENERAL

Mounting Position Any
Number of Igniters One
Ambient Temperature Range (non-operating) -40 to +100°C
Net Weight, approximately 5 oz.

MAXIMUM RATINGS

Transmitter Peak Power (Note 1) 250 kw
Shutter Circuit Holding Current 160 mA dc
Ignitor Current 200 μA dc

(Note 1) The shutter is not intended for applications involving the switching of peak power greater than one kilowatt, therefore, the rating applies only when the shutter is open.

OUTLINE DRAWING

As per attached drawing dated 4-8-55.

ELECTRICAL AND MECHANICAL DATA

Effective Short Plane (Measured from outer surface of input flange) Min. Bogey Max.

0.058 0.065 0.072 inches
INPUT FLANGE

EXHAUST MUST NOT EXTEND BEYOND FLANGES MORE THAN 3/4"

REFERENCE DIMENSIONS

<table>
<thead>
<tr>
<th>REF</th>
<th>DIMENSION</th>
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<tbody>
<tr>
<td>A</td>
<td>0.1605 DR. (4) HOLES</td>
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<tr>
<td>B</td>
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<tr>
<td>C</td>
<td>1.220</td>
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<tr>
<td>D</td>
<td>1 1/16 R.</td>
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<tr>
<td>E</td>
<td>1 280</td>
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<td>F</td>
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<td>G</td>
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<tr>
<td>H</td>
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<tr>
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<tr>
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<tr>
<td>L</td>
<td>17/8 MAX.</td>
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<tr>
<td>M</td>
<td>8-32 NC (4) HOLES</td>
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SPECIFICATION SHEET

OUTLINE

G616/BL-326

BOMAC LABORATORIES INC.
SALEM ROAD
BEVERLY, MASSACHUSETTS

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