JETEC TYPE DESIGNATION REGISTRATION FORM

SHUTTER AND TR TUBES

Manufacturer's Designation: BL-316
JETEC Designation: 6595
Manufacturer: Bomac Laboratories, Inc.
Beverly, Massachusetts

GENERAL CHARACTERISTICS

The 6595 is a combined tunable TR tube and shutter for use in X-Band. The shutter mechanism, when closed, insures protection for the receiver crystal from nearby transmitters 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. Its tuning range is from 8490 to 9600 megacycles per second.

ELECTRICAL DATA - TYPICAL VALUES

<table>
<thead>
<tr>
<th>TR Tube (with shutter open)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Load Q (max.)</td>
<td>350</td>
</tr>
<tr>
<td>Tuning Range</td>
<td>8490 to 9600 Mc/s</td>
</tr>
<tr>
<td>Ignitor Ignition Time (max.)</td>
<td>5 sec.</td>
</tr>
<tr>
<td>Ignitor Voltage Drop at Ii = 100 uAdc.</td>
<td>200 to 400 Vdc.</td>
</tr>
<tr>
<td>Peak Leakage Power (max.)</td>
<td>30 mw.</td>
</tr>
<tr>
<td>[ F = 9375; po = 10 kw. ]</td>
<td></td>
</tr>
<tr>
<td>[ tp = 0.5 us; prr = 1000 pps; ]</td>
<td></td>
</tr>
<tr>
<td>[ Ii = 100 uAdc. ]</td>
<td></td>
</tr>
<tr>
<td>Insertion Loss (max.) at 9375 Mc and Ii = 0</td>
<td>1.5 db.</td>
</tr>
<tr>
<td>Ignitor Interaction (max.) at Ii = 100 uAdc.</td>
<td>0.2 db.</td>
</tr>
<tr>
<td>Recovery Time (max.) at 10 kw peak, 3 db down</td>
<td>4.0 us.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shutter Tube</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attenuation (min.) (shutters closed)</td>
</tr>
<tr>
<td>Shutter Circuit Voltage</td>
</tr>
<tr>
<td>Shutter Circuit Pull-In Current (min.)</td>
</tr>
<tr>
<td>Shutter Circuit Pull-In Current (min.)</td>
</tr>
<tr>
<td>Shutter Circuit Holding Current (min.)</td>
</tr>
<tr>
<td>Shutter Circuit Holding Current (min.)</td>
</tr>
</tbody>
</table>

from JETEC release #1873, March 18, 1957
MECHANICAL DATA - GENERAL

Mounting Position  Any
Weight, approximately  1/4 lb.

ABSOLUTE MAXIMUM RATINGS

Transmitter Peak Power (TR Tube) Note 1  100 kw.
Transmitter Average Power  100 W
Ignitor Current  200 uA dc.
Shutter Holding Current  600 mA dc.

OUTLINE DRAWING

As per attached drawing dated 7-6-56

Note 1: The shutter is not intended for applications involving switching of peak power greater than one kilowatt. Therefore the rating applies only when the shutter is either open or closed.
To be recessed 1/16 from edge of flange min.

Ref. | Dimension
--- | ---
A** | 0.087±0.015
B* | 0.612
C* | 1.625±0.015
D* | 0.890±0.015
E | 0.990 Rad.
4 Slots
F | 3/4 Max.
G* | 3.000 Max.
H** | 1.625±0.015
J* | 1.280
K* | 0.535 Max.
L* | 1.220
M**: | 3/64 x 1/16 Slot
N**: | 0.250 Dia. Nom.
P* | 1 3/8 Max.
Q* | 1 7/16 Max.

This outline is used for the following tubes:

6565/BL-313
6595/BL-316
BL-347

SPECIFICATION SHEET
Outline See above for usage

BOMAC LABORATORIES INC.
SALEM ROAD
BEVERLY, MASSACHUSETTS

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