

JETEC TYPE DESIGNATION REGISTRATION FORM

SHUTTER AND TR TUBE

Manufacturer's Designation: BL-320

December 18, 1956

JETEC Designation: 6597

Manufacturer: Bomac Laboratories, Inc.
Beverly, Massachusetts

GENERAL CHARACTERISTICS

The 6597 is a combined shutter and broad-band TR tube (1E63A) for use with RG-52/U size waveguide. The shutter mechanism, when closed, insures protection of the receiver crystal from nearby transmitters when the radar set is not in use. When the shutter is open, the TR tube functions in a normal manner and provides decoupling of the receiver from a common transmitting and receiving antenna during a period of transmission. It is an integral cavity type. It's operational band is from 8490 to 9578 megacycles per second.

ELECTRICAL DATA - TYPICAL VALUES

TR Tube (With shutters open)

Operational Band

VSWR 1.9 max.

8490 to 9578 Mc/s.

VSWR 1.4 max.

8565 to 9487 Mc/s.

Ignitor Ignition Time (max.)

5 Sec.

Ignitor Voltage Drop. at $I_i=100 \mu\text{Adc}$.

200 to 375 Vdc.

Spike Leakage Energy (max.)

0.3 erg.

$F=9000 \text{ Mc}$; $p_o=40 \text{ kw}$;

$tp_1=1.0 \mu\text{s}$; $tp_2=0.5 \mu\text{s}$

$prr=1000 \text{ pps}$; $I_i=100 \mu\text{Adc}$.

Flat Leakage Power (max.)

40 mw.

(See Spike Leakage Energy for test conditions)

Insertion Loss (max.) at 9000 Mc and $I_i=0$

0.7 db

Ignitor Interaction (max.) at $I_i=100 \mu\text{Adc}$

0.2 db

Recovery Time at 200 kw peak, 3db down

10 μs .

Position of Short.

0.058 to 0.072 in.

(Short is measured from the face of the input flange of the tube and is further from the magnetron.)

Shutter Tube

Attenuation (min) (with shutter closed)

40 db.

(From 8490 to 9578 Mc/s.)

Shutter Tube (cont.)

Shutter Circuit Voltage (nom)	6V (ac-dc)
Shutter Circuit Pull-In Current (min.)	0.60 Adc
Shutter Circuit Pull-In Current (min.)	0.47 Aac.
Shutter Circuit Holding Current (min.)	0.22 Adc

MECHANICAL DATA-GENERAL

Mounting Position	Any
Weight, approximately	

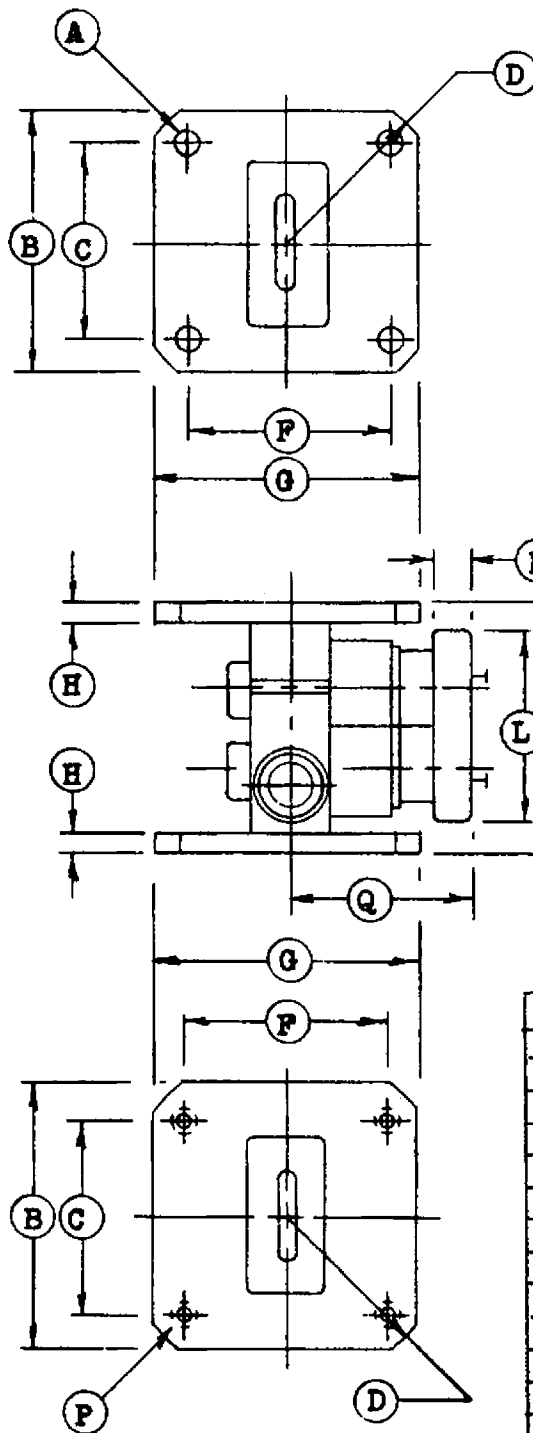
ABSOLUTE MAXIMUM RATINGS

Transmitter Peak Power (max.) (Note 1)	250 kw.
Transmitter Average Power	250 W
Ignitor Current	200 uAdc

OUTLINE DRAWING

As per attached outline dated 6/15/56

Note 1 The shutters are not intended for applications involving switching of peak power greater than one kilowatt. Therefore the rating applies only when the shutters are either open or closed.



Note:- Exhaust stem must not extend beyond flange more than $1/4''$.

Ref.	Dimension
A	#18(.1695) Dr. 4 Holes
B**	1 5/8
C*	1.220 $\pm$.005
D**	1 1/16 Rad.
E	1 Max.
F*	1.280 $\pm$.005
G**	1 5/8
H**	3/32
J	1.555 $\pm$.010
K	9/32 Max.
L	1 1/8 Max.
M**	0.250 Dia. Nom.
N*	1 3/8 Max.
P	#8-32 NC 4 Holes
Q*	1 5/8 Max.

SPECIFICATION SHEET

Outline

6615/BL-312, 6597/BL-320

BOMAC LABORATORIES INC.
SALEM ROAD
BEVERLY, MASSACHUSETTS

6-15-56 clr