

JETEC TYPE DESIGNATION REGISTRATION FORM

SHUTTER AND TR TUBES

Manufacturer's Designation: BL-309
JETEC Designation: 6592
Manufacturer: Bomac Laboratories, Inc.
Beverly, Massachusetts

December 12, 1956

GENERAL CHARACTERISTICS

The 6592 is a combined broad-band TR tube and shutter for use in C-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 shutters are 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 operational band is from 5200 to 5530 megacycles per second.

ELECTRICAL DATA - TYPICAL VALUES

TR Tube (with shutters open)

Operational Band

VSWR 1.9 max. 5200 to 5530 Mc/s
VSWR 1.4 max. 5280 to 5450 Mc/s

Ignitor Ignition Time (max.) 5 sec.

Ignitor Voltage Drop at $I_i = 100$ mAdc 200 to 400 Vdc.

Spike Leakage Energy (max.) 0.3 erg.

$F = 5365$ Mc; $p_o = 70$ kw;

$tp_1 = 1.0$ us; $tp_2 = 0.5$ us;

$pr = 1000$ pps; $I_i = 100$ uAdc.

Flat Leakage Power (max.) 70 mw.

(See Spike Leakage for test conditions)

Insertion Loss (max.) at 5365 Mc. and $I_i = 0$ 0.8 db

Ignitor Interaction (max.) at $I_i = 100$ uAdc 0.2 db

Recovery Time (max.) at 1000 kw peak, 3 db down 9.0 us.

Position of Short 0.070 to 0.100 inches

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

Shutter Tube

Attenuation (shutters closed) 5200 to 5530 Mc. 40 db.

Shutter Circuit Voltage 28 Vdc.

Shutter Circuit Pull-In Current (min.) 110 mAdc.

Shutter Circuit Holding Current (min.) 60 mAdc.

MECHANICAL DATA - GENERAL

Mounting Position	Any
Weight, approximately	1-1/2 lbs.

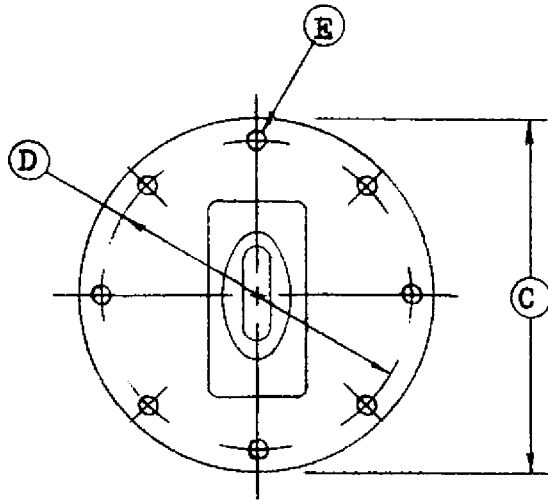
ABSOLUTE MAXIMUM RATINGS

Transmitter Peak Power (TR Tube) (Note 1)	1000 kw.
Transmitter Average Power	1000 W
Igniter Current	200 uAdc
Shutter Holding Current	160 mAdc

OUTLINE DRAWING

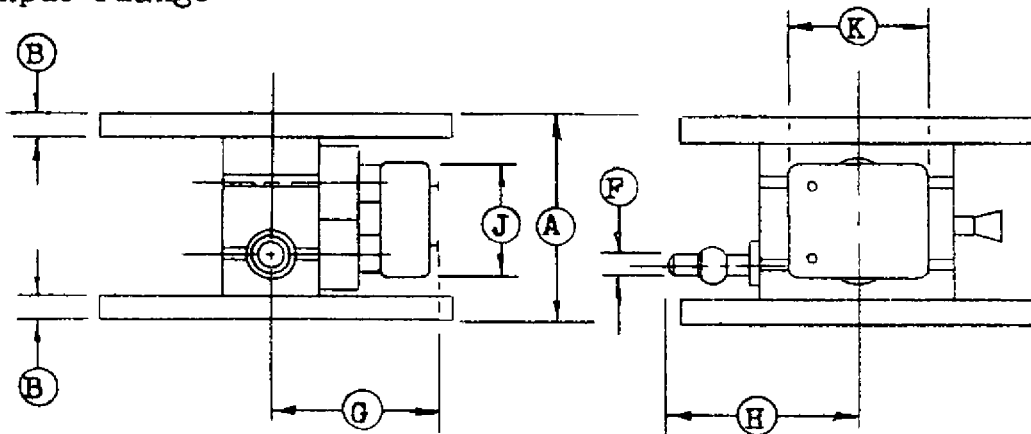
As per attached drawing dated 12-5 -56

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.

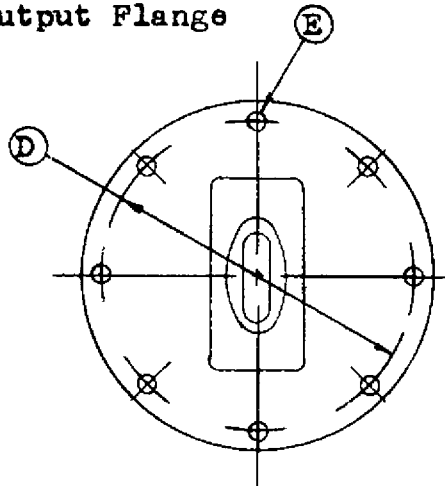


Note:-
Exhaust tube not to extend beyond flange.

Input Flange



Output Flange



Ref.	Dimension
A	2.345 ±.015
B	0.250 ±.015
C	3.625 ±.015 Dia.
D*	3.250 ±.005 Dia.
E	0.221 Drill
	8 Holes Ea. Flg.
F*	0.250 ±.005 Dia.
G	1.875 Max.
H	2.250 Max.
J	1.250 Max.
K	1.750 Max.

SPECIFICATION SHEET

Outline

6592/BL-309

BOMAC LABORATORIES INC.
SALEM ROAD
BEVERLY, MASSACHUSETTS

12-5-56 clr