

JETEC TYPE DESIGNATION REGISTRATION FORM

TR and SHUTTER TUBE

Manufacturer's Designation: BL-329 March 8, 1957
JETEC Designation: 6602
Manufacturer: Bomac Laboratories, Inc.

GENERAL CHARACTERISTICS

The 6602 is a combined shutter and broad-band TR tube (type 5927) designed for use with RG48/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 functions normally and provides decoupling of the receiver during a period of transmission. It is an integral cavity type with fixed tuned gaps. Its operational band is from 3070 to 3530 megacycles per second.

ELECTRICAL DATA - TYPICAL VALUES

TR Tube (with shutter open)

Operational Band

VSWR 1.9 maximum	3070 to 3530 Mc/sec.
VSWR 1.6 maximum	3100 to 3500 Mc/sec.
VSWR 1.4 maximum	3300 Mc/sec.

Ignitor Ignition Time (max.)

5 sec.

Ignitor Voltage Drop at $I_i=200\mu\text{A dc}$

250-400 Volts

Spike Leakage Energy (max.)

F= 3300 Mc; $p_o=200\text{ kw}$;	0.3 ergs
$t_{p1}=1.0\mu\text{sec}$; $t_{p2}=0.5\mu\text{s}$;	
$p_{rr}=1000\text{ pps}$; $I_i=200\mu\text{A dc}$	

Flat Leakage Power (max.)

50 mw

(see Spike Leakage for test conditions)

Insertion Loss (max.) at 3300Mc and $I_i=0$

0.7 db

Ignitor Interaction (max.) at 3300Mc and $I_i=200\mu\text{A dc}$

0.3 db

Recovery Time (max.) at 750 kw peak 3 db down

15 μs

High Level VSWR (max.)

1.15

F= 3300 Mc, $p_o=50\text{ kw}$; $t_p=1.0\mu\text{s}$
$p_{rr}=1000\text{ pps}$; $I_i=200\mu\text{A dc}$

Shutter Tube

Attenuation (min.) from 3100 to 3500Mc. (shutter closed)	40 db
Shutter Circuit Voltage	17-30 Vdc
Shutter Circuit Pull-In Current (min.)	78 mA dc
Shutter Circuit Holding Current (min.)	60 mA dc

MECHANICAL DATA- GENERAL

Mounting Position	Any
Weight, approximately	2.5 lbs.

ABSOLUTE MAXIMUM RATINGS

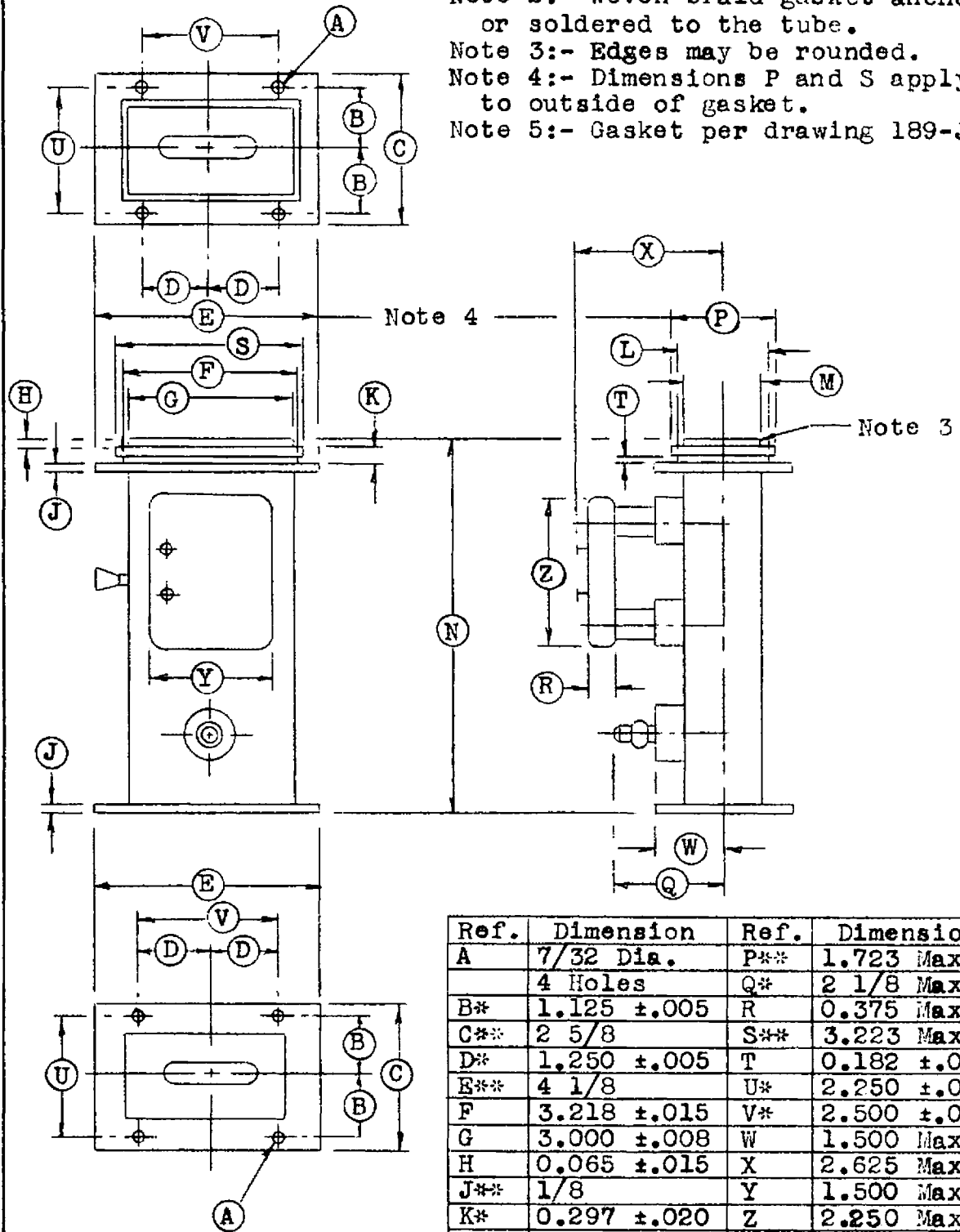
Transmitter Peak Power (Note 1)	750 kw
Transmitter Average Power	750 W
Ignitor Current	200 μ Adc
Shutter Holding Current	160 mAdc

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 or closed.

OUTLINE DRAWING

As per attached drawing dated 3-7-57.

- Note 1:- Exhaust tube must not extend beyond flange more than 1/4 inch.
 Note 2:- Woven braid gasket anchored or soldered to the tube.
 Note 3:- Edges may be rounded.
 Note 4:- Dimensions P and S apply to outside of gasket.
 Note 5:- Gasket per drawing 189-JAN.



Ref.	Dimension	Ref.	Dimension
A	7/32 Dia.	P**	1.723 Max.
	4 Holes	Q*	2 1/8 Max.
B*	1.125 ±.005	R	0.375 Max.
C**	2 5/8	S**	3.223 Max.
D*	1.250 ±.005	T	0.182 ±.005
E**	4 1/8	U*	2.250 ±.010
F	3.218 ±.015	V*	2.500 ±.010
G	3.000 ±.008	W	1.500 Max.
H	0.065 ±.015	X	2.625 Max.
J**	1/8	Y	1.500 Max.
K*	0.297 ±.020	Z	2.250 Max.
L	1.718 ±.015		
M	1.500 ±.008		
N	4.858 ±.030		

SPECIFICATION SHEET

Outline

6602/BL-329

BOMAC LABORATORIES INC.
SALEM ROAD
BEVERLY, MASSACHUSETTS

3-9-57 clr