

JETEC TYPE DESIGNATION REGISTRATION FORM

TR AND SHUTTER TUBE

Manufacturers Designation: BL-327
JETEC Designation: 6601
Manufacturer: Bomac Laboratories, Inc.
Beverly, Massachusetts

GENERAL CHARACTERISTICS

The 6601 is a combined shutter and broad-band dual TR tube designed to operate with suitable short-slot hybrid junctions to provide a balanced duplexer using RG-51/U size waveguide input and RG-52/U size waveguide output. 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 gas switching tube functions normally. It is an integral cavity type with fixed tuned gaps. Its operational band is from 8490 to 9578 megacycles.

ELECTRICAL DATA - TYPICAL VALUES

TR Tube (with shutter open)

Operational Band	
VSWR 1.4 maximum	8490 to 9578 Mc/s
VSWR 1.2 maximum	8565 to 9487 Mc/s
Ignitor Ignition Time (max.)	5 sec.
Ignitor Voltage Drop at $I_i=100\mu\text{A}$ dc (each electrode)	200 - 375 volts
Spike Leakage Energy (max.)	
F=9000 Mc; $p_o=40\text{kw}$; $t_{p1}=1.0\mu\text{sec}$;	0.1 ergs
$t_{p2}=0.5\mu\text{s}$; prr=1000 pps;	
$I_i=100\mu\text{A}$ dc each electrode	
Flat Leakage Power (max.)	20 mw
(see Spike Leakage for test conditions)	
Duplexer Loss (max.) $I_i=100\mu\text{A}$ dc, each electrode	
from 8490 to 9578 Mc.	1.1 db
from 8565 to 9487 Mc.	0.9 db
Isolation (min.)	
from 8490 to 9578 Mc.	15 db
from 8565 to 9487 Mc.	17 db
at 9000 Mc.	20 db
Recovery Time (max.) at 200 kw peak	
and $I_i=100\mu\text{A}$ dc each electrode	7.0 μsec .
High Level VSWR (max.)	
F=9000 mc; $p_o=40\text{ kw}$; $t_{p1}=1.0\mu\text{sec}$.	
prr=1000 pps; $I_i=100\mu\text{A}$ dc, each electrode	1.2

Shutter Tube

Attenuation (min.) shutter closed	40 db
Shutter Circuit Voltage (nom.)	28 Vdc
Shutter Circuit Pull-In Current (min.)	155 mA _{dc}
Shutter Circuit Holding Current (min.)	110 mA _{dc}

MECHANICAL DATA- GENERAL

Mounting Position	any
Number of Electrodes	Two
Weight, approximately	14 ozs.

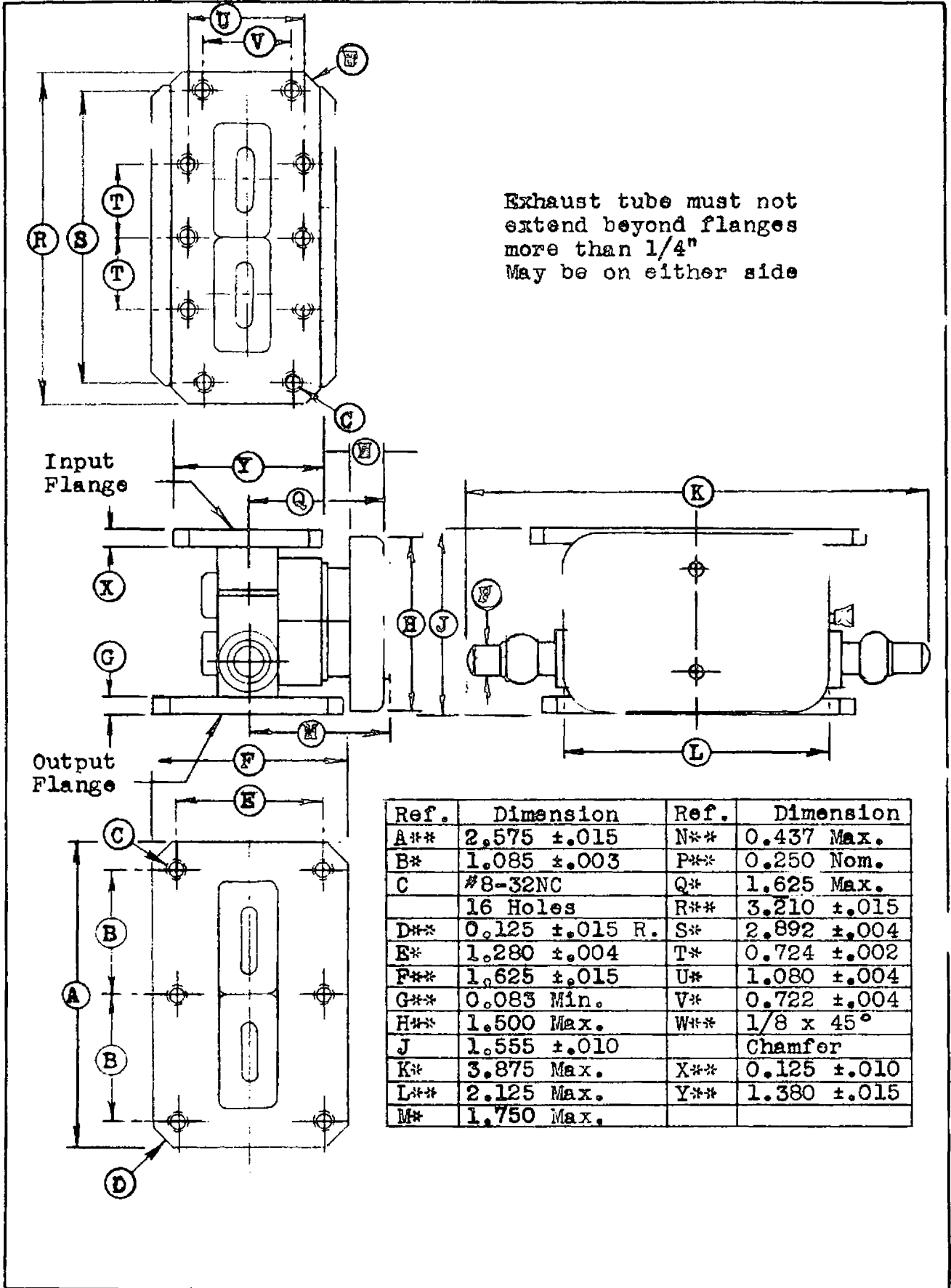
ABSOLUTE MAXIMUM RATINGS

Transmitter Peak Power (Note 1)	250 kw
Transmitter Average Power	250 W
Ignitor Current (each electrode)	200 μ A _{dc}
Shutter Circuit Holding Current	335 mA _{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 or closed.

OUTLINE DRAWINGS

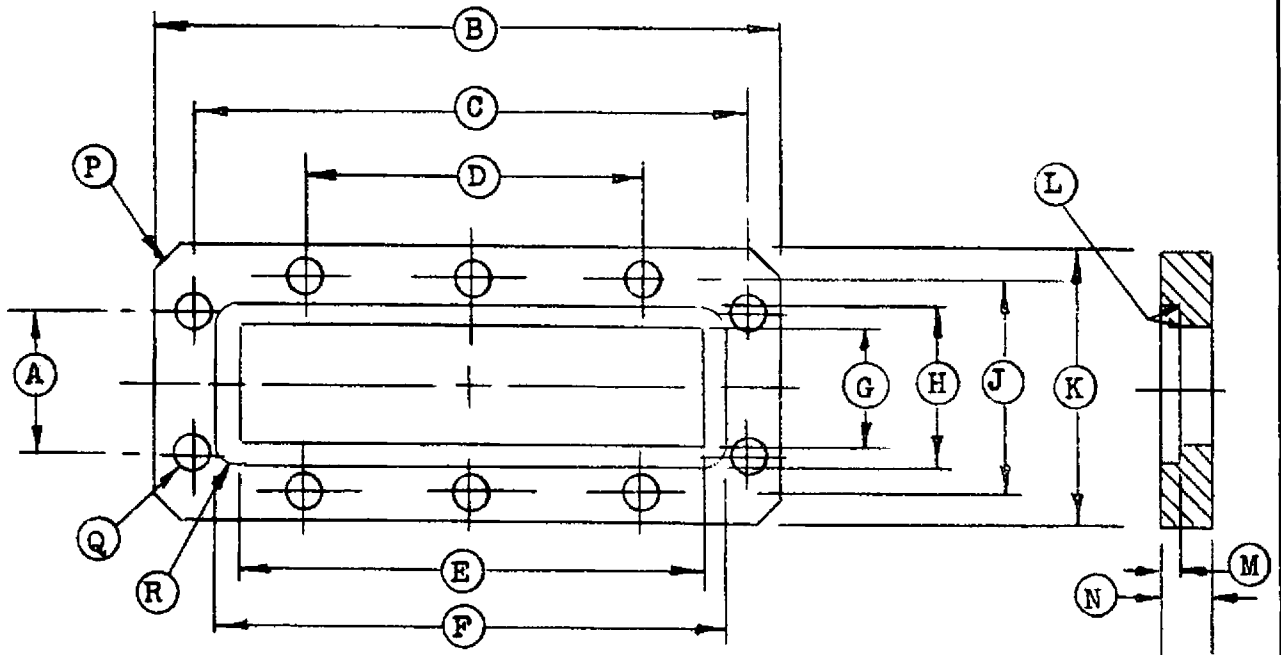
Outline as per attached drawing dated 9-12-56
Input Mating Flange as per attached drawing dated 3-4-57
Output Mating Flange as per attached drawing dated 11-10-54



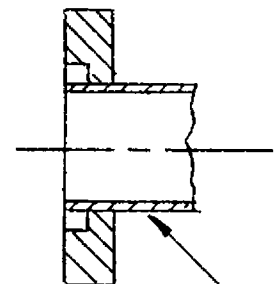
Exhaust tube must not extend beyond flanges more than 1/4" May be on either side

Ref.	Dimension	Ref.	Dimension
A**	2.575 ±.015	N**	0.437 Max.
B*	1.085 ±.003	P**	0.250 Nom.
C	#8-32NC	Q*	1.625 Max.
	16 Holes	R**	3.210 ±.015
D**	0.125 ±.015 R.	S*	2.892 ±.004
E*	1.280 ±.004	T*	0.724 ±.002
F**	1.625 ±.015	U*	1.080 ±.004
G**	0.083 Min.	V*	0.722 ±.004
H**	1.500 Max.	W**	1/8 x 45°
J	1.555 ±.010		Chamfer
K*	3.875 Max.	X**	0.125 ±.010
L**	2.125 Max.	Y**	1.380 ±.015
M*	1.750 Max.		

SPECIFICATION SHEET		BOMAC LABORATORIES INC. SALEM ROAD BEVERLY, MASSACHUSETTS
Outline		
6601/BL-327		9-12-56 clr



Ref.	Dimensions
A	.722 ±.004
B	3.210
C	2.892 ±.008
D	1.448 ±.008
E	2.440 +.002 -.001
F	2.684 ±.004
G	.628 +.002 -.001
H	.872 ±.004
J	1.080 ±.004
K	1.380
L	.005 R. Max.
M	.069 ±.002
N	.250
P	.120 x 45° chamfer or 1/8 R.
Q	# 17 (.173) Dr. (10) holes
R	.046 R. ±.002



FLANGE → WAVEGUIDE

Flange used for following
 6601/BL-327
 6642/BL-600
 BL-335
 BL-341
 BL-655
 6598/BL-321
 6564/BL- 71

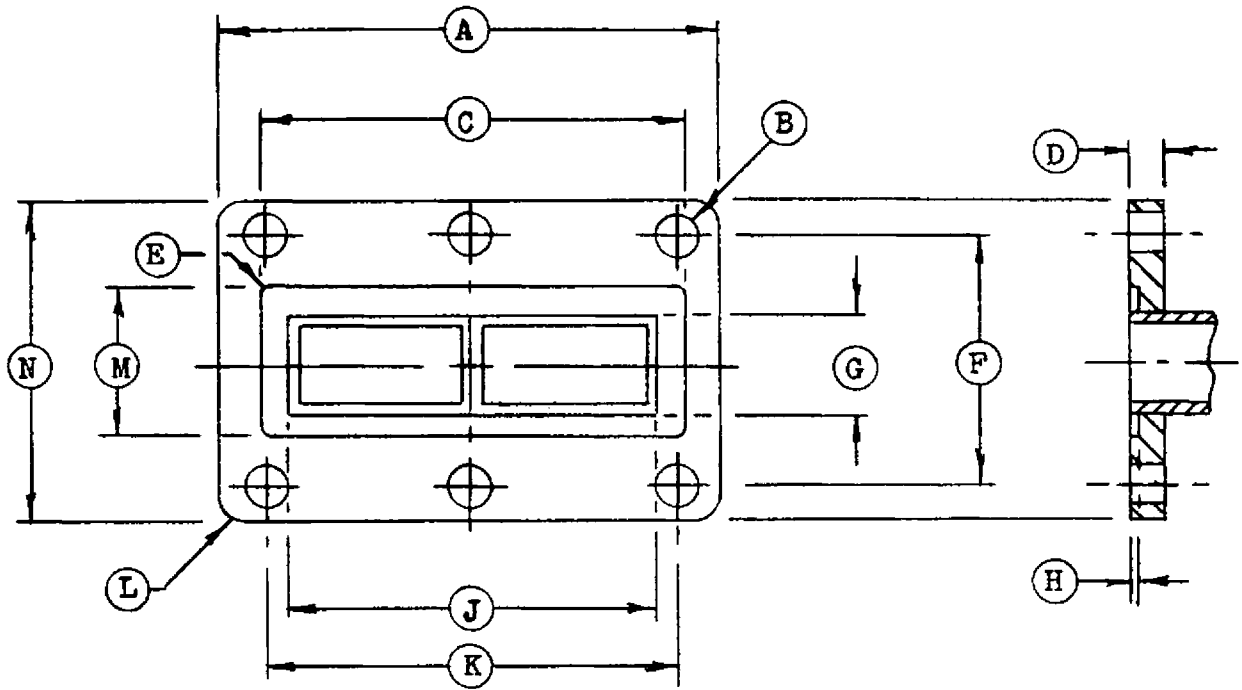
SPECIFICATION SHEET

MATING FLANGE

BOMAC LABORATORIES INC.
 SALEM ROAD
 BEVERLY, MASSACHUSETTS

GS-2E-1.10.20.07

3-4-57 R.R.



Ref.	Dimension
A	2.575 ±.015
B	#18(.1695) Dr.
	6 Holes
C	2.203 +.005 -.000
D	0.220 ±.010
E	3/64 Rad.
F	1.280 ±.004
G	0.500 ±.003
H	0.070 ±.001
J	1.950 ±.004
K	2.170 ±.006
L	0.120 Rad. Approx.
M	0.753 +.005 -.000
N	1.625 ±.015

This outline used for following tubes:-

BL-78, BL-307, 6599/BL-322, BL-331, BL-655

6796, 6601/BL-327, 6642/BL-600, BL-335,

BL-341, BL-339, BL-649, BL-651H, BL-686H

6647/ BL 604H

	SPECIFICATION SHEET	BOMAC LABORATORIES INC. SALEM ROAD BEVERLY, MASSACHUSETTS
	Mating Flange	
OSCE-1.10.20.10		11-10-54 clr