JETEC TYPE DESIGNATION REGISTRATION FORM

TR TUBES

Manufacturer's Designation: BL-322 March 4, 1957
JETEC Designation: 6599
Manufacturer: Bomac Laboratories, Inc.
Beverly, Massachusetts.

GENERAL CHARACTERISTICS

The 6599 is a combined shutter and dual broad-band TR tube (type 6334) designed to operate with suitable short-slot hybrid junctions to provide a balanced duplexer using 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 duplexer 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 with fixed tuned gaps. Its operational band is from 8490 to 9578 Mc.

ELECTRICAL DATA - TYPICAL VALUES

TR Tube (with shutters 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=100μAdc (each electrode)	200-375 volts
Spike Leakage Energy (max.)	
F=9000 Mc; po=40 kw, tp_1=1μs;	0.1 ergs
tp_2=0.5μs; prr=1000 pps.	
I_i=100 μAdc on each electrode	
Flat Leakage Power (max.)	
(see Spike Leakage for test conditions)	20 mw
Duplexer Loss (max.) I_i=100μAdc (each electrode)	
from 8490 to 9578 Mc.	1.2 db
from 8565 to 9487 Mc.	1.0 db
Isolation (min.) from 8490 to 9578 Mc.	15 db
Isolation (min.) from 8565 to 9487 Mc.	18 db
Isolation (min.) at 9000 Mc.	20 db
Recovery Time (max.) at 200 kw peak 3 db down	7.0 μs
High Level VSWR (max.)	
F=9000 Mc; po=40kw; tp1=1.0μs;	1.2
prr=1000 pps; I_i=100 μAdc (each electrode)	

Shutter Tube

Attenuation (min.) from 8490 to 9578 Mc. (shutters closed)	40 db.
Shutter Circuit Voltage (nom.)	6 V(ac-dc)
Shutter Circuit Pull-In Current (min.)	900 mAdc 980 m Aac
Shutter Circuit Holding Current (min.)	440 m Adc 980 m Aac

MECHANICAL DATA - GENERAL

Mounting Position	any
Number of Ignitors	Two
Weight approximately	14 ozs.

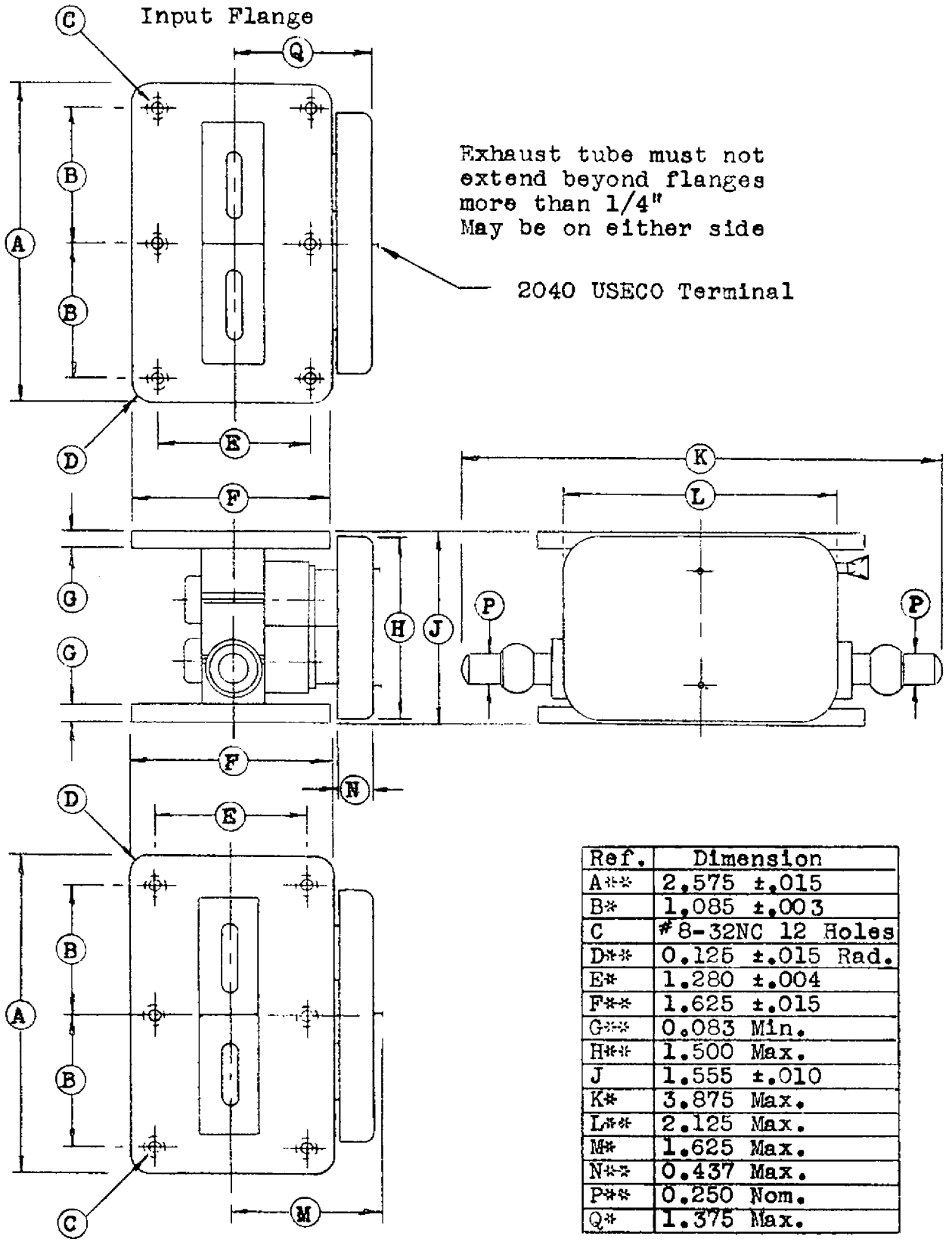
ABSOLUTE MAXIMUM RATINGS

Transmitter Peak Power (Note 1)	250 kw
Transmitter Average Power	250 W
Ignitor Current (each electrode)	200 μ Adc

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 shutters are open or closed.

OUTLINE DRAWING

Outline as per attached drawing dated 6-15 56.
Mating Flange as per attached drawing dated 11-10-54



Ref.	Dimension
A**	2.575 ±.015
B*	1.085 ±.003
C	#8-32NC 12 Holes
D**	0.125 ±.015 Rad.
E*	1.280 ±.004
F**	1.625 ±.015
G**	0.083 Min.
H**	1.500 Max.
J	1.555 ±.010
K*	3.875 Max.
L**	2.125 Max.
M*	1.625 Max.
N**	0.437 Max.
P**	0.250 Nom.
Q*	1.375 Max.

SPECIFICATION SHEET

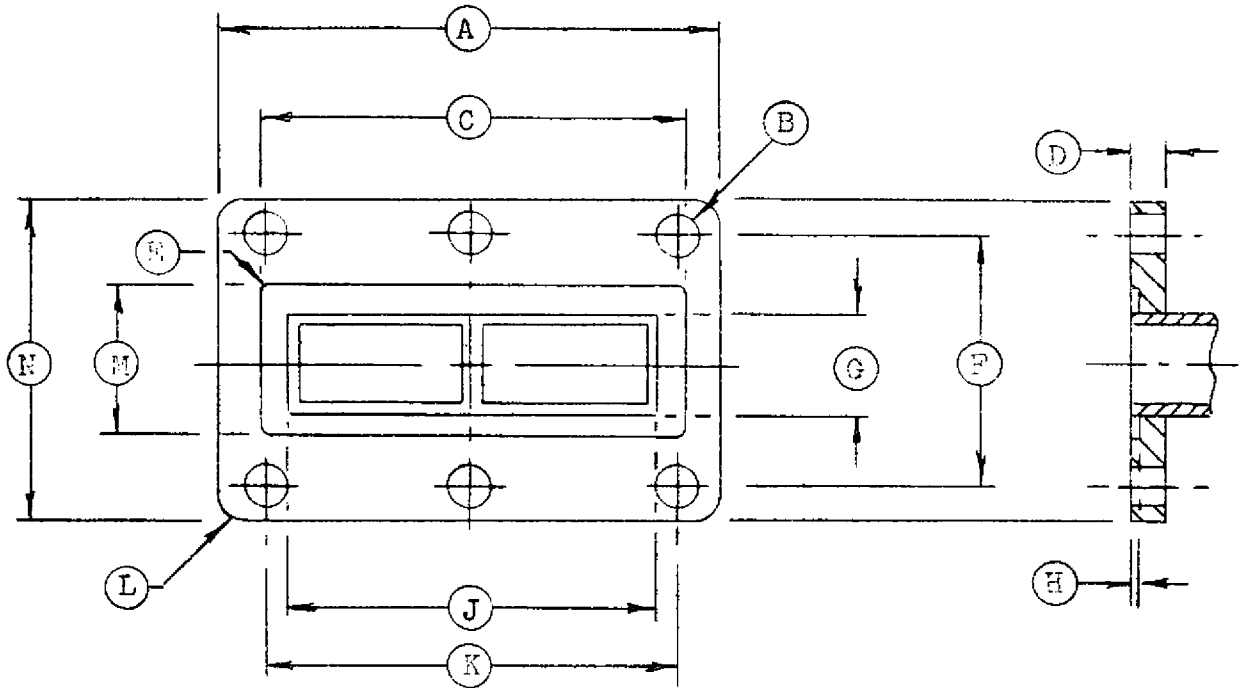
Outline

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

BOMAC LABORATORIES INC.
SALEM ROAD
BEVERLY, MASSACHUSETTS

6-15-56 clr

PRINTED BY SPAULDING-MOSS CO., BOSTON, MASS., RE-ORDER NO. 1-56



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

	SPECIFICATION SHEET	BOMAC LABORATORIES INC. SALEM ROAD BEVERLY, MASSACHUSETTS
GS-2E-1.10.20.10	Mating Flange	11-10-54 clr

PRINTED BY SPAULDING MOSS CO., BOSTON, MASS., RE ORDER NO. F 56