

JETEC TYPE DESIGNATION REGISTRATION FORM

TR TUBES

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

March 4, 1957

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 $I_i=100\mu\text{A}$ dc (each electrode) 200-375 volts

Spike Leakage Energy (max.)

$F=9000\text{ Mc}$; $p_o=40\text{ kw}$, $t_{p1}=1\mu\text{s}$; 0.1 ergs

$t_{p2}=0.5\mu\text{s}$; $p_{rr}=1000\text{ pps}$.

$I_i=100\mu\text{A}$ dc on each electrode

Flat Leakage Power (max.)

(see Spike Leakage for test conditions) 20 mw

Duplexer Loss (max.) $I_i=100\mu\text{A}$ dc (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.)

$F=9000\text{ Mc}$; $p_o=40\text{ kw}$; $t_{p1}=1.0\mu\text{s}$; 1.2

$p_{rr}=1000\text{ pps}$; $I_i=100\mu\text{A}$ dc (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.

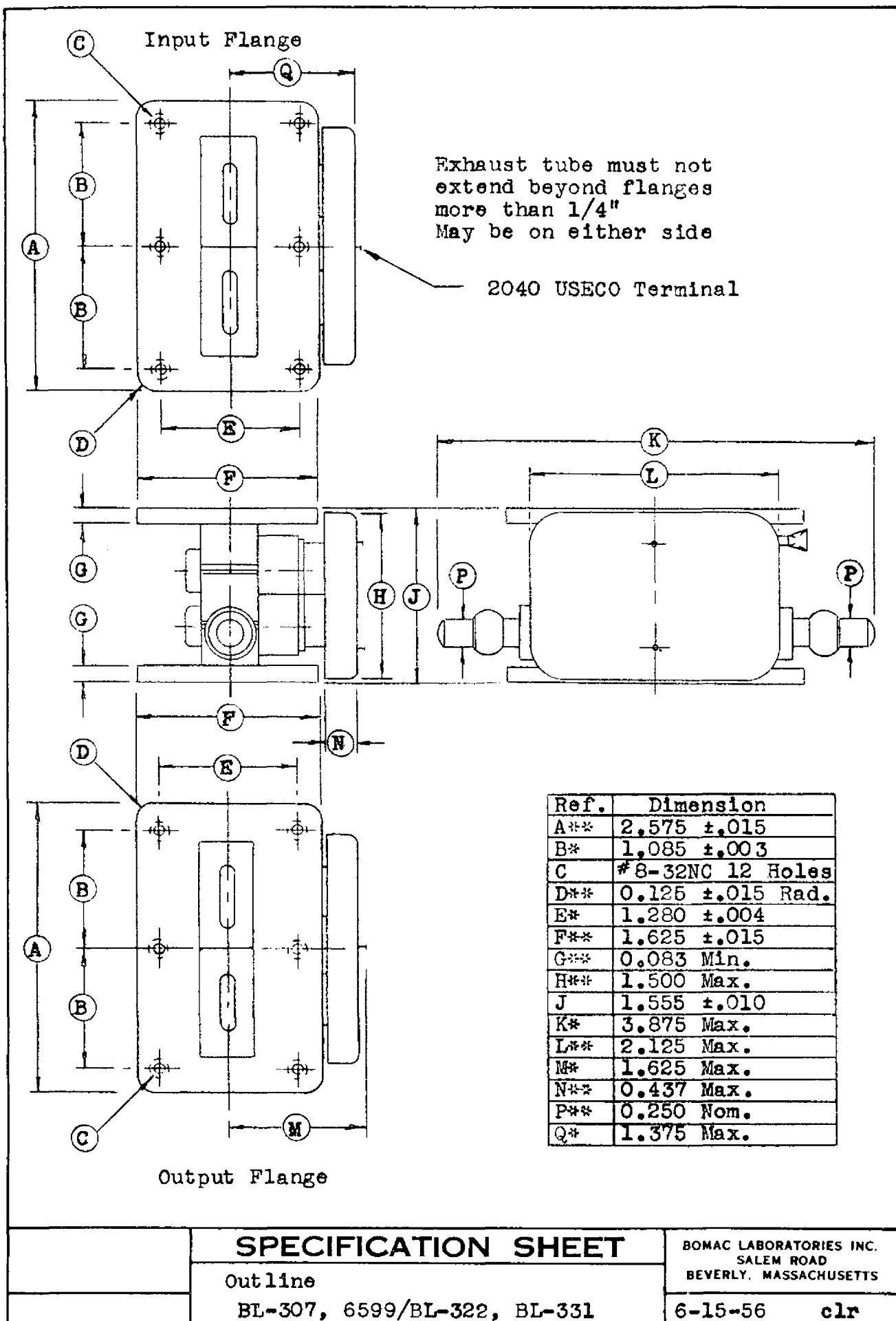
ABSOLUTE MAXIMUM RATINGS

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



SPECIFICATION SHEET

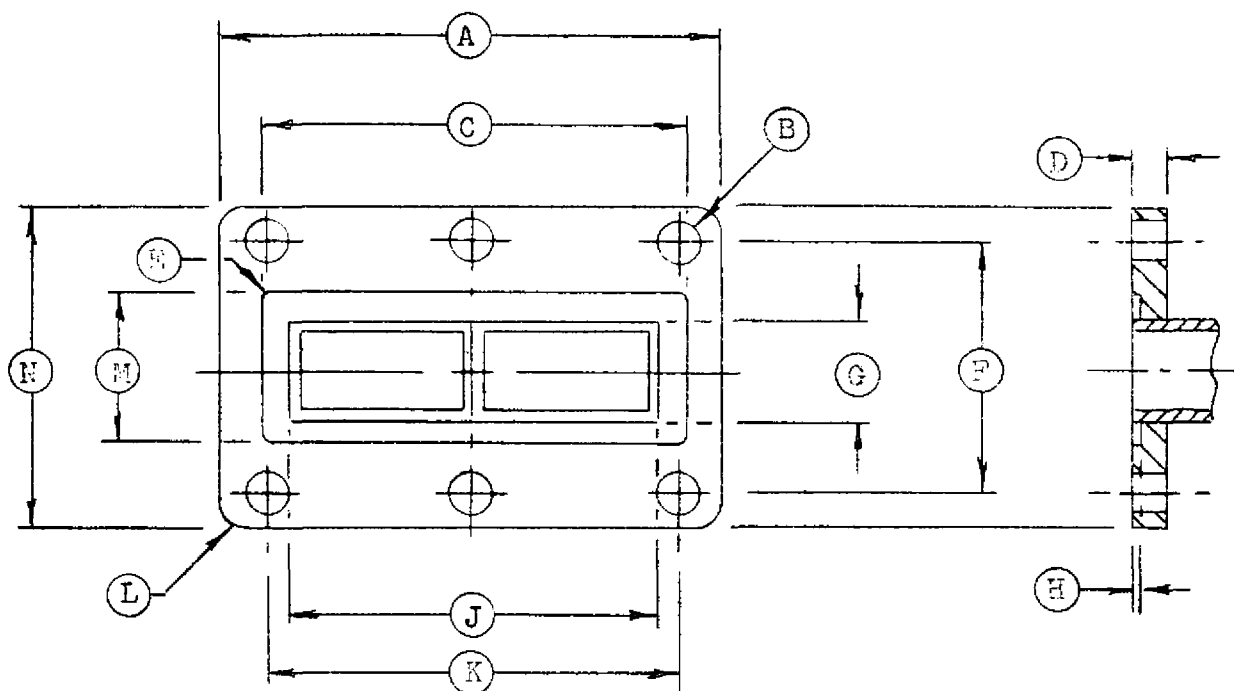
Outline

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

BOMAC LABORATORIES INC.
SALEM ROAD
BEVERLY, MASSACHUSETTS

6-15-56

clr



Ref.	Dimension
A	2.575 $\pm$.015
B	#18(.1695) Dr.
	6 Holes
C	2.203 $\pm$.005 $\pm$.000
D	0.220 $\pm$.010
E	3/64 Rad.
F	1.280 $\pm$.004
G	0.500 $\pm$.003
H	0.070 $\pm$.001
J	1.950 $\pm$.004
K	2.170 $\pm$.006
L	0.120 Rad. Approx.
M	0.753 $\pm$.005 $\pm$.000
N	1.625 $\pm$.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-636H

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