

JETEC TYPE DESIGNATION REGISTRATION FORM

DUAL TR TUBE

Manufacturer's Designation: BL-604H
JETEC Designation: 6647
Manufacturer: Bomac Laboratories, Inc.
Beverly, Massachusetts

March 18, 1957

GENERAL CHARACTERISTICS

The 6647 is a dual broad-band gas switching tube designed to operate with suitable short-slot hybrid junctions to provide a balanced duplexer using RG-52/U size waveguide. Two heaters and a thermostat permanently attached to the tube allow operation over a wide range of ambient temperature. It is an integral cavity type with fixed tuned gaps. Its operational band is from 8490 to 9578 megacycles.

ELECTRICAL DATA TYPICAL VALUES

Operational Band	
VSWR 1.4 maximum	8490 to 9578Mc/sec.
VSWR 1.2 maximum	8565 to 9487Mc/sec.
Ignitor Ignition Time (max.)	5 sec.
Ignitor Voltage Drop at $I_i=100\mu\text{Adc}$ (each electrode)	200-375 volts
Spike Leakage Energy (max.)	0.1 ergs
F= 9000Mc; $p_o=40\text{kw}$; $t_{p1}=1.0\mu\text{sec}$. $t_{p2}=0.5\mu\text{sec}$; $p_{rr}=1000\text{ pps}$; $I_i=100\mu\text{Adc}$ on each electrode	
Flat Leakage Power (max.) (see Spike Leakage for test conditions)	20 mw
Duplexer Loss (max.) $I_i=100\mu\text{Adc}$ on each electrode	
from 8490 to 9578Mc.	1.2 db
from 8565 to 9487Mc.	1.0 db
Isolation (min.)	
from 8490 to 9578Mc.	14 db
from 8565 to 9487Mc.	16 db
at 9000Mc.	18 db
Recovery Time (max.) at 100kw peak 3 db down	1.5 μs
High Level VSWR (max.)	1.2
F= 9000Mc; $p_o=40\text{kw}$; $t_p=1.0\mu\text{sec}$; $p_{rr}=1000\text{ pps}$; $I_i=100\mu\text{Adc}$	
Heater Voltage (380-1000 cps)	115 Vac
Heater Wattage	25 W
Thermostat Cut-In Temperature (min.)	4°C
Thermostat Cut-Out Temperature (max.)	50°C

MECHANICAL DATA-GENERAL

Mounting Position	Any
Number of Ignitors	Two
Weight, approximately	10 ounces

ABSOLUTE MAXIMUM RATINGS

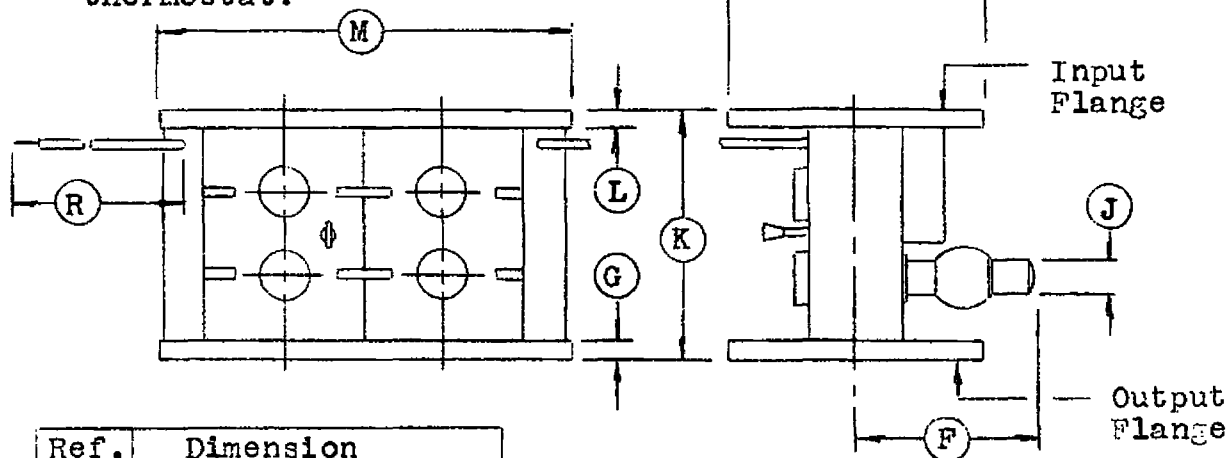
Transmitter Peak Power	100 kw
Transmitter Average Power	100 W
Ignitor Current (each electrode)	200 μ Adc
Thermostat Contact Current	2 Aac

OUTLINE DRAWINGS

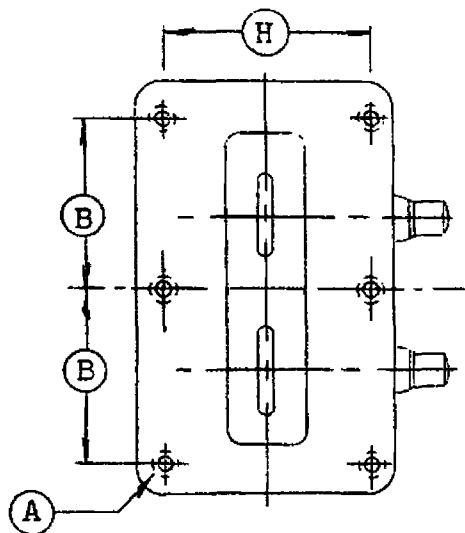
Outline as per attached drawing dated 2-24-57.
Mating Flange as per attached drawing dated, 11-10-54.

Notes:-

1. The rect. formed by the six mounting holes on each flange, dimensions (A) and (B) shall be centered on the flange face to within $1/32"$.
2. Silver plate 100 MSI or equiv.
3. Rhodium flash over silver plating is optional.
4. Heaters, thermostat and exhaust tube must not extend beyond flange.
5. Clearance must be maintained for socket head screws in flanges.
6. This hole covered by thermostat.



Ref.	Dimension
A	#8-32NC-1 6 Holes
B*	1.085 $\pm$.003
C	90° $\pm$ 5°
D*	1.280 $\pm$.004
E	#18(.1695) 6 Holes
F*	1 3/8 Max.
G**	0.083 Min.
H*	1.280 $\pm$.004
J**	0.250 Dia.
K	1.555 $\pm$.010
L**	0.083 Min.
M*	2.575 $\pm$.015
N**	1.625 $\pm$.015
P**	1/8 Rad.
Q*	1.085 $\pm$.003
R*	18.00 Min.
	Both Leads



SPECIFICATION SHEET

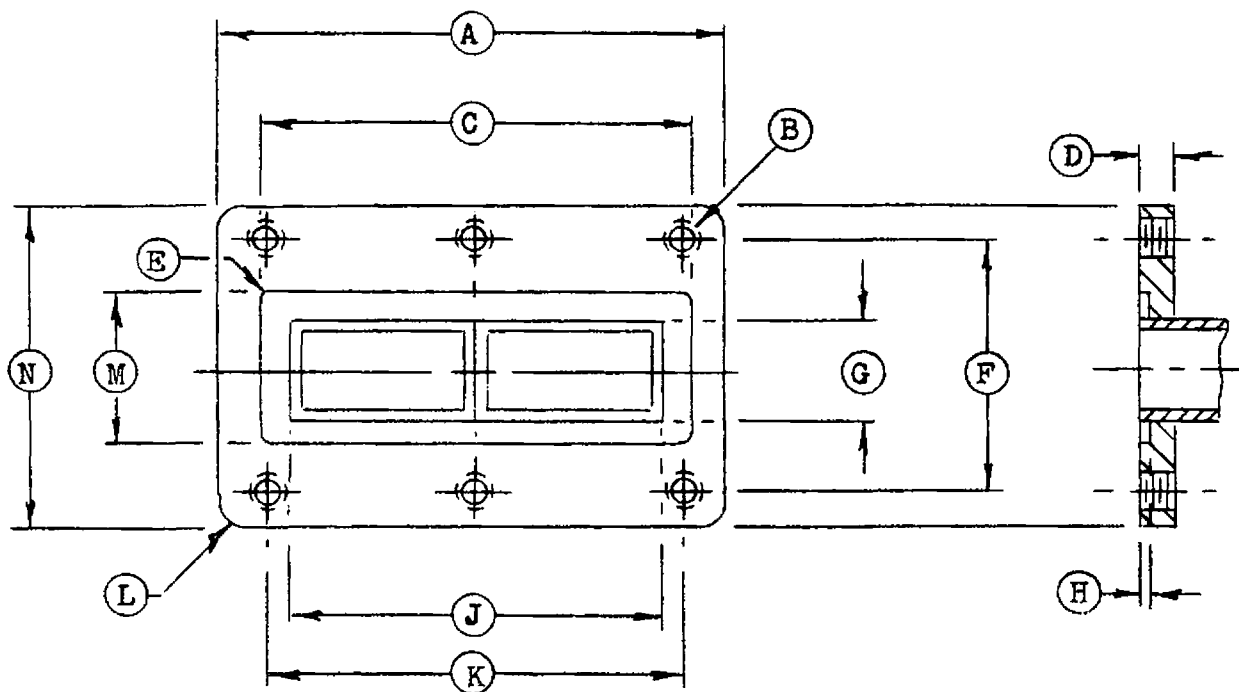
Outline

6647/BL-604H

BOMAC LABORATORIES INC.
SALEM ROAD
BEVERLY, MASSACHUSETTS

2-24-57

clr



Ref.	Dimension
A	2.575 $\pm$.015
B	#8-32NC Tap
	6 Holes
C	2.203 $\pm$.005 $\pm$.000
D	0.220 $\pm$.010
E	3/64 Radius
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:-

6796, BL-344, 6648/BL-615. BL-625
BL-355 6647/ BL-604H

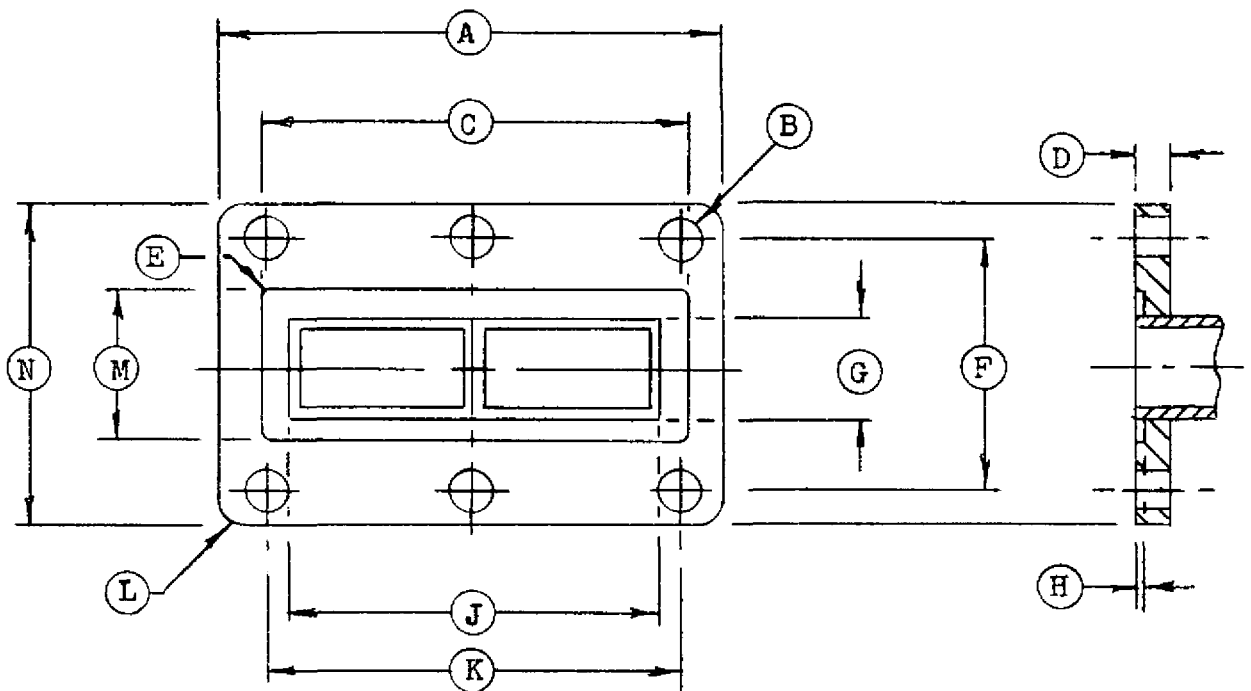
SPECIFICATION SHEET

BOMAC LABORATORIES INC.
SALEM ROAD
BEVERLY, MASSACHUSETTS

CS-2E-1.10.2008

Mating Flange

11-10-54 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-686H
 6647/ BL 604H

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