

JETEC TYPE DESIGNATION REGISTRATION FORM

DUAL TR TUBE

Manufacturer's Designation: BL 613 April 23, 1957
JETEC Designation: 6905
Manufacturer: Bomac Laboratories, Inc.
Beverly, Massachusetts

GENERAL CHARACTERISTICS

The 6905 is a dual broad-band TR tube designed to operate with suitable short-slot hybrid junctions to provide a balanced duplexer using RG-44/U size waveguide. It is an integral cavity type with an operational band from 5400 to 5900 megacycles.

ELECTRICAL DATA - TYPICAL VALUES

Operational Band

VSWR 1.3 maximum 5400 to 5900 Mc/sec.
VSWR 1.2 maximum 5450 to 5850 Mc/sec.

Ignitor Ignition Time (max.) each electrode 5 sec.

Ignitor Voltage Drop at $I_i=100 \mu\text{Adc}$ (each
(electrode) 200 - 400 Volts

Spike Leakage Energy (max.) 0.1 ergs

$F=5650$; $p_o=70 \text{ kw}$; $t_{p1}=1.0 \mu\text{sec}$;
 $t_{p2}=0.5 \mu\text{sec}$; $p_{rr}=1000 \text{ pps}$
 $I_i=100 \mu\text{Adc}$ on each electrode

Flat Leakage Power (max.) 10 mw
(see Spike Leakage for test conditions)

Duplexer Loss (max.) at $I_i=100 \mu\text{Adc}$ (each electrode)
from 5400 to 5900 Mc. 1.2 db
from 5450 to 5850 Mc. 1.0 db

Isolation (min.)
from 5400 to 5900 Mc 10 db
from 5450 to 5850 Mc 10 db
at 5650 Mc 12 db

Recovery Time (max.) at 3000 kw peak 3 db down 10 μs

High Level VSWR (max.) 1.2

$F=5650 \text{ Mc}$, $p_o=300 \text{ kw}$; $t_p=1.0 \mu\text{s}$
 $p_{rr}=1000 \text{ pps}$; $I_i=100 \mu\text{Adc}$ (each electrode)

Phase Shift

$F=5450 \text{ Mc}$. $\angle t = -32$ to -42 deg.
 $F=5650 \text{ Mc}$. $\angle t = +11$ to $+21$ deg.
 $F=5825 \text{ Mc}$. $\angle t = +55$ to $+65$ deg.

MECHANICAL DATA - GENERAL

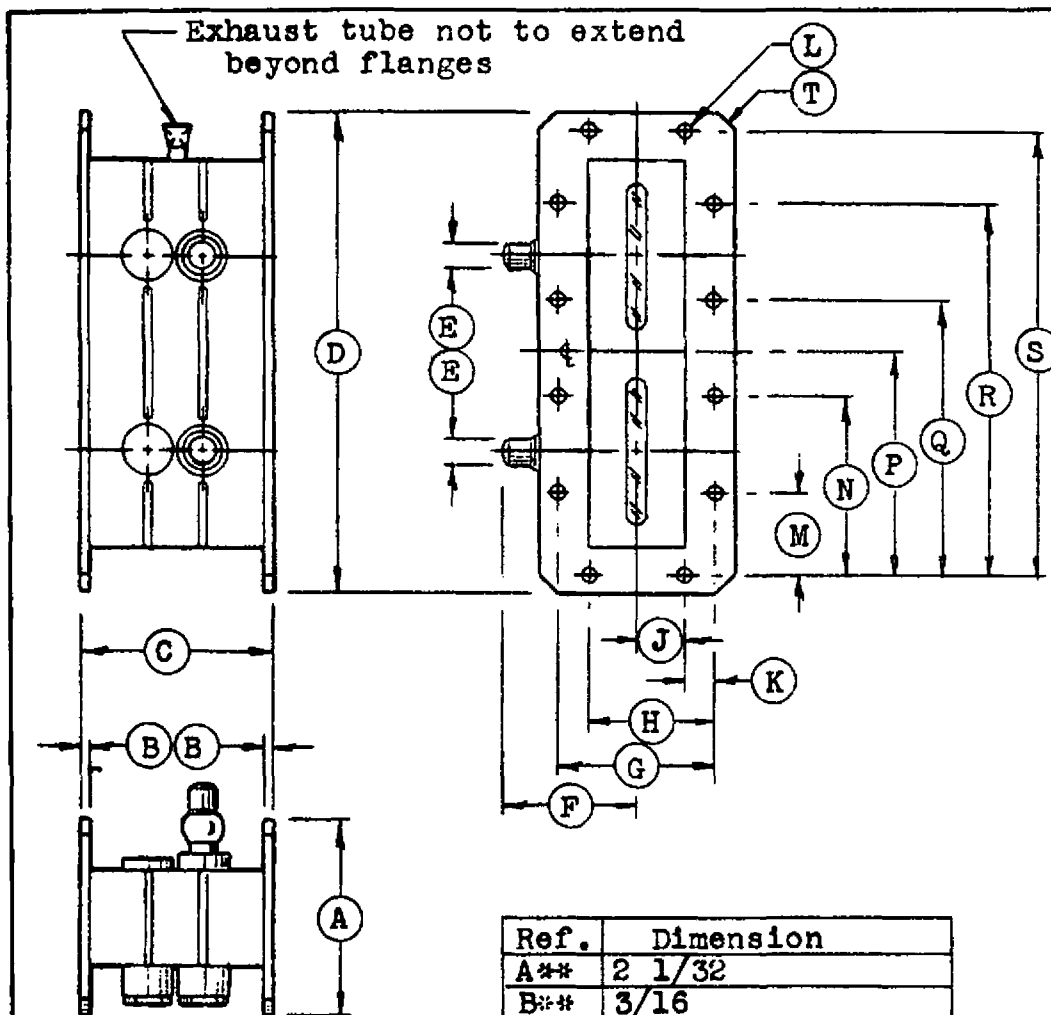
Mounting Position	Any
Number of Electrode	Two
Weight, approximately	1.25 lbs.

ABSOLUTE MAXIMUM RATINGS

Transmitter Peak Power	3000 kw
Transmitter Average Power	2000 W
Ignitor current (each electrode)	200 μ Adc

OUTLINE DRAWING

Outline as per attached drawing dated 4-4-57
Mating Flange as per attached drawing dated 2-1-55



Ref.	Dimension
A**	2 1/32
B**	3/16
C	1.945 ±.010
D**	5 1/32
E**	0.250 Dia. Nom.
F*	1 13/16 Max.
G*	1.658 ±.004
H*	1.329 ±.004
J*	0.500 ±.004
K*	0.329 ±.004
L	#10-32NF 12 Holes
	Each Flange
M*	0.829 ±.004
N*	1.829 ±.004
P*	2.329 ±.004
Q*	2.829 ±.004
R*	3.829 ±.004
S*	4.658 ±.004
T**	3/16 x 45° Chamfer

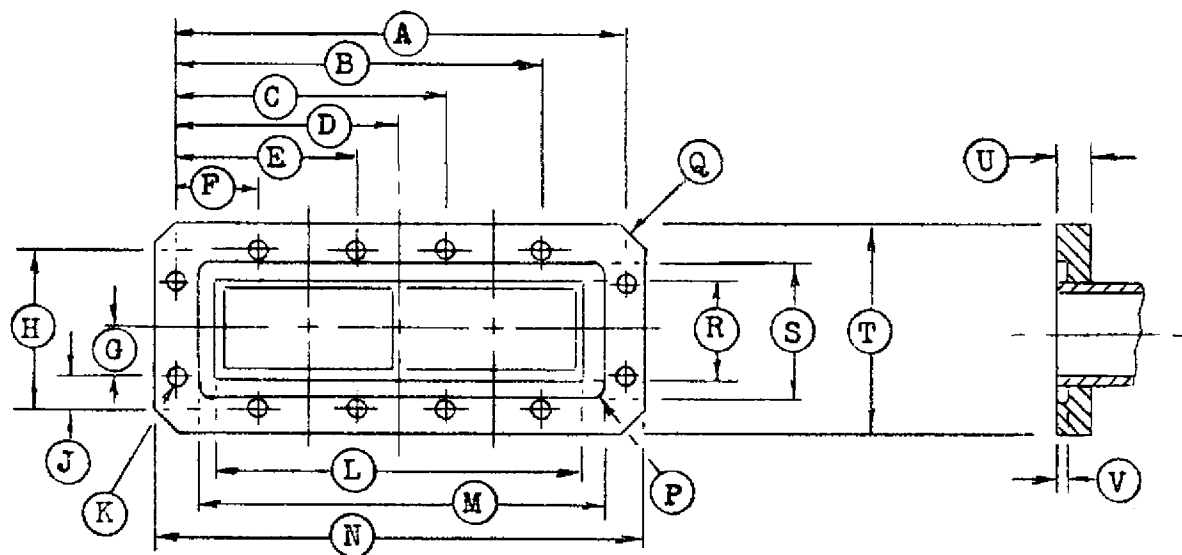
SPECIFICATION SHEET

Outline

6905/BL-613

BOMAC LABORATORIES INC.
SALEM ROAD
BEVERLY, MASSACHUSETTS

4- 4-57 clr



Ref.	Dimension	Ref.	Dimension
A	4.658 $\pm$.002	L	4.000 $\pm$.005
B	3.829 $\pm$.002	M	4.375 $\pm$.005
C	2.829 $\pm$.002	N	5 1/32
D	2.329 $\pm$.003	P	3/32 Rad.
E	1.829 $\pm$.002	Q	3/16 x 45 Chamfer
F	0.829 $\pm$.002	R	1.000 $\pm$.005
G	0.500 $\pm$.003	S	1.375 $\pm$.005
H	1.658 $\pm$.002	T	2 1/32
J	0.329 $\pm$.003	U	0.350 Min.
K	13/64 (.203) Dr.	V	0.110 $\pm$.002
	12 Holes		

Note:- Outline used for following tubes

6640/BL-60, 6641/BL-86, BL-336

BL-352, 6905/BL-613, BL-644

GS-2E-1.10.20.01

	SPECIFICATION SHEET	BOMAC LABORATORIES INC. SALEM ROAD BEVERLY, MASSACHUSETTS
	Mating Flange	
	See Note	2-1-55 clr