

December 14, 1962

JOINT ELECTRON TUBE ENGINEERING COUNCIL

RETMA TYPE DESIGNATION REGISTRATION FORM FOR KLYSTRONS

Release No. _____

Manufacturer's
Designation BL-800

Manufacturer's Name

Varian Associates, Bomac Division

Data Bureau Designation 6780

The 6780 klystron is an oscillator for C. W. operation of the reflex type. It is a mechanically tuned klystron requiring no external cavity resonators. Output fittings are designed for use with RG52/U waveguide. The recommended operating frequency lies between 8.5 and 10.0 kilo megacycles. The power output is approximately 20 mw over this frequency range. The tube is air cooled. The 6780 klystron is designed for use as a local oscillator.

ELECTRICAL DATA

Heater Voltage	<u>6.3</u>	Volts
Heater Current	<u>1.2</u>	Amps.
Maximum Frequency	<u>10.0</u>	kmc
Minimum Frequency	<u>8.5</u>	kmc

MECHANICAL DATA

Base and Physical Dimensions - See outline drawing.

Base Connections A = H, B = H, C = Body, D = Ref., E = Cathode

Cavity Integral Cavity Type

Mounting Information Any position from waveguide flange

Cooling Data No Cooling

ABSOLUTE RATING

	<u>Pulsed</u>	<u>C. W.</u>	<u>Units</u>
Resonator	_____	200	Volts
Cathode Current	_____	.023	Amps. max..
Reflector Voltage (max.)	_____	-160	Volts
(min.)	_____	- 75	Volts

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ABSOLUTE RATINGS (cont'd.)

	<u>Pulsed</u>	<u>C. W.</u>	<u>Units</u>
Reflector Current	_____	3×10^{-6}	Amps. max.
Heater-Cathode Voltage (peak)	_____	6.3	Volts
Dissipation (exclusive of heater power)	_____	4.6	Watts
Load VSWR	_____	1.10	max.

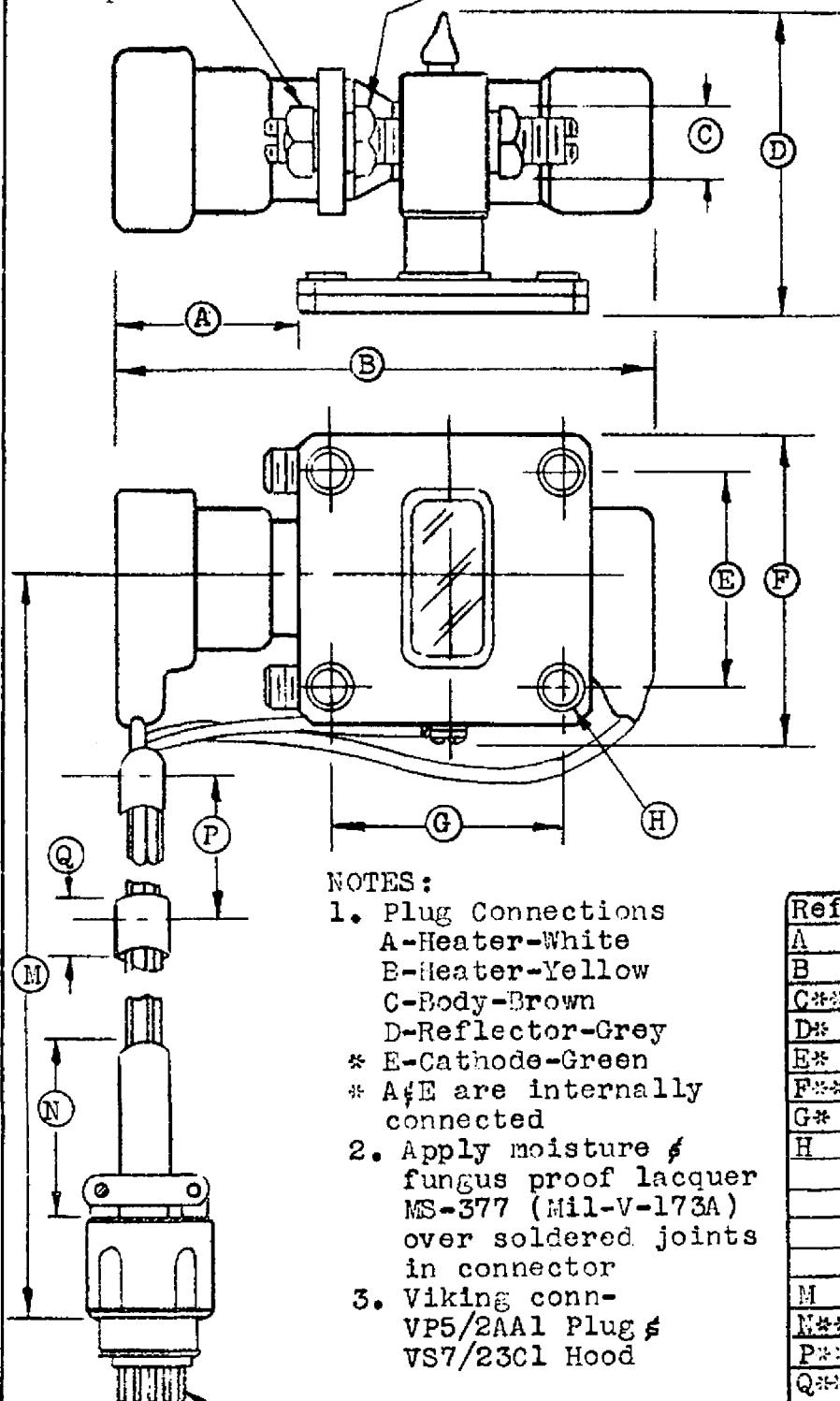
TYPICAL OPERATION

Cavity Integral Cavity Type

Frequency	Tunable	8.5 to 10.0 kmc	
Resonator Voltage		200	Volts
Cathode Current		.020	Amps.
Reflector Voltage			
(adjusted for maximum power output)		-75 to -160	Volts
Reflector Current		1×10^{-7}	Amps
Reflector Mode Number (designation)		6	
Electronic Tuning (3 db)		30	Mc
Average Power Output		.025	Watts

OUTLINE DRAWING Attached

Low Freq. Tunner Stop
High Freq. Tunner
Stop



NOTES:

1. Plug Connections
A-Heater-White
B-Heater-Yellow
C-Body-Brown
D-Reflector-Grey
* E-Cathode-Green
* A&E are internally connected
2. Apply moisture & fungus proof lacquer MS-377 (Mil-V-173A) over soldered joints in connector
3. Viking conn-
VP5/2AA1 Plug &
VS7/23C1 Hood

Note 3

Ref.	Dimensions.
A	1.000 Max.
B	3.00 Max.
C**	.438
D*	1.750 Max.
E*	1.220 ±.004
F**	1.900 Max.
G*	1.380 ±.004
H	.219 Dia.
	(4) Holes.
	w/.185 D.
	removable
	inserts.
M	7.00 ±.25
N**	3.00 Approx.
P**	1.5 Approx.
Q**	.45 Approx.

SPECIFICATION SHEET

OUTLINE

6780/BL-800, 6316/BL-800A

BOMAC LABORATORIES INC.
SALEM ROAD
BEVERLY, MASSACHUSETTS

10 Sep 58 R.R.