

December 14, 1962

JOINT ELECTRON TUBE ENGINEERING COUNCIL

RETMA TYPE DESIGNATION REGISTRATION FORM FOR KLYSTRONS

Release No. _____

Manufacturer's

Designation BL-803

Manufacturer's Name

Varian Associates, Bomac Division

Data Bureau Designation 6781

The 6781 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 6781 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 (specify) No Cooling

ABSOLUTE RATINGS

	<u>Pulsed</u>	<u>C. W.</u>	<u>Units</u>
Resonator Voltage	_____	200	Volts
Cathode Current	_____	.023	Amps. max.
Reflector Voltage (max.)	_____	-165	Volts
(min.)	_____	- 75	Volts

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ABSOLUTE RATINGS (cont'd.)

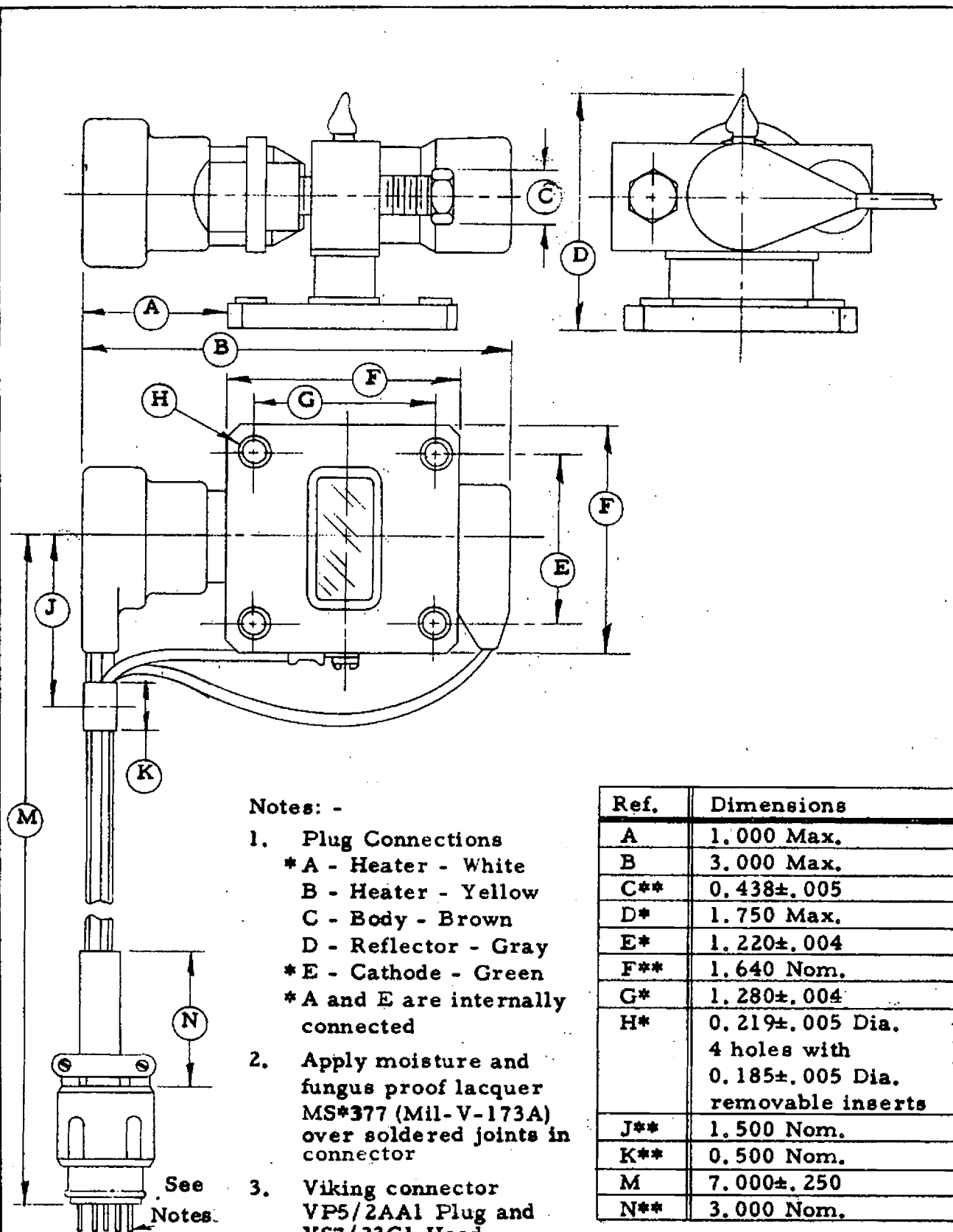
	<u>Pulsed</u>	<u>C. W.</u>	<u>Units</u>
Reflector Current	_____	3×10^{-6}	Amps. max.
Heater-Cathode Voltage (peak)	_____	6.3	Volts
Dissipation (exclusive of heater power)	_____	4.6	Watts
Load VSWR	_____	1.10	max.

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



Ref.	Dimensions
A	1.000 Max.
B	3.000 Max.
C**	0.438±.005
D*	1.750 Max.
E*	1.220±.004
F**	1.640 Nom.
G*	1.280±.004
H*	0.219±.005 Dia. 4 holes with 0.185±.005 Dia. removable inserts
J**	1.500 Nom.
K**	0.500 Nom.
M	7.000±.250
N**	3.000 Nom.

SPECIFICATION SHEET

Outline 6781/BL-803

BOMAC LABORATORIES INC.
SALEM ROAD
BEVERLY, MASSACHUSETTS

5-1-62