



KLYSTRON

A two cavity Tunable Klystron Oscillator for Transmitter operation in the 'X' Band. This valve is designed to minimise the effects of vibration and to withstand heavy acceleration.

PHYSICAL DETAILS.

Max. Overall length	...	8.48ins. (216 mm.)
For other dimensions, see outline drawing on page 3.		
*Output waveguide	...	W.G. 15
Water connections thread	...	No. 10-32U.N.F.-2A
Mounting position	...	Any.
Weight	...	1.66 Kg. (3lb. 10oz.)

HEATER.

Heater Voltage	...	7 to 8.5 volts.
Heater Input Power	...	15.5 to 21 watts.
Heater Resistance at 18w. Input	...	
Power	...	1.9 to 2.1 ohms.
Cold Heater Resistance	...	0.2 ohms.
Max. Heater Switching Surge	...	8 amps.

RATINGS.

Max. Beam Voltage...	...	8.0 kV.
Max. Beam Current	...	40 mA.

FREQUENCY.

‡Operating frequency Range	...	8000—9000 Mc/s.
Tuning Range	...	± 20 Mc/s.

WATER COOLING.

Minimum water flow	...	0.3 litre/min.
§Maximum water flow	...	3.0 litre/min.
Maximum temperature of coolant	...	50 °C.
Coolant pressure drop at 0.6 litres/min. flow at 10°C.	...	0.1 lb./sq. in.

TYPICAL OPERATION AND CHARACTERISTICS.

Beam Voltage	...	6.8—7.4 kV.
Beam Current	...	28—30 mA.
Output Power	...	10—20 watts.
Electronic tuning range	...	
Frequency pushing with Beam volts	...	3 kc/s./V.
Frequency pushing with heater current	...	200 c/s./A.
Frequency pulling	...	4.5 Mc/s.
Temperature coefficient of frequency	...	150 kc/s./°C.
Microphony	...	less than 4000 c/s/g up to 10g in the range 20—200 cycles
Shock	...	Up to 150g of 7 milliseconds. duration produces no detectable frequency variation.

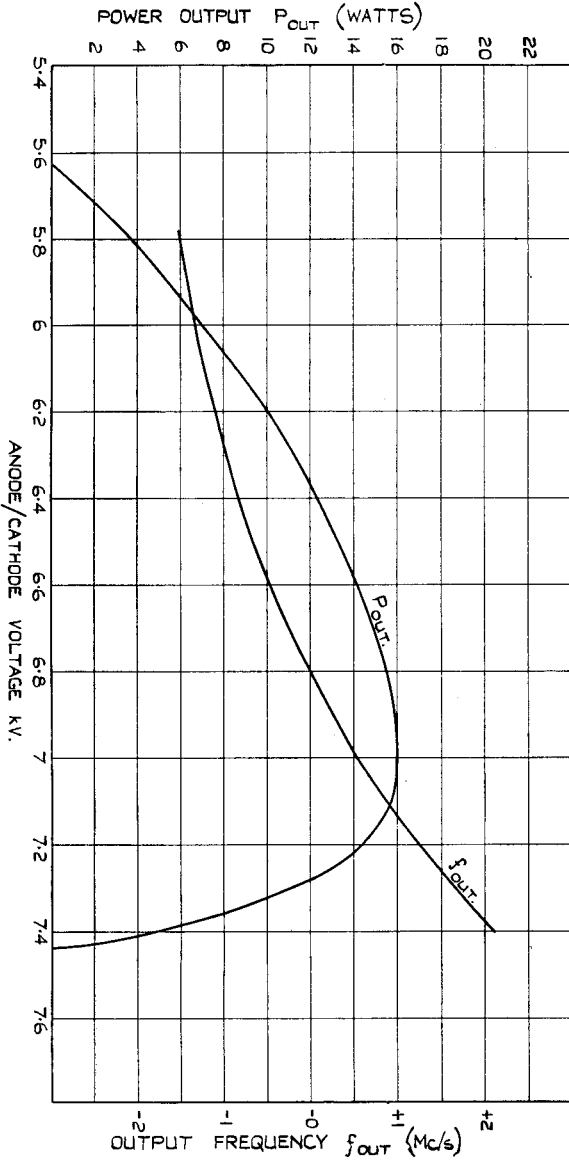
*Bolts to UG40A/U Choke flange.

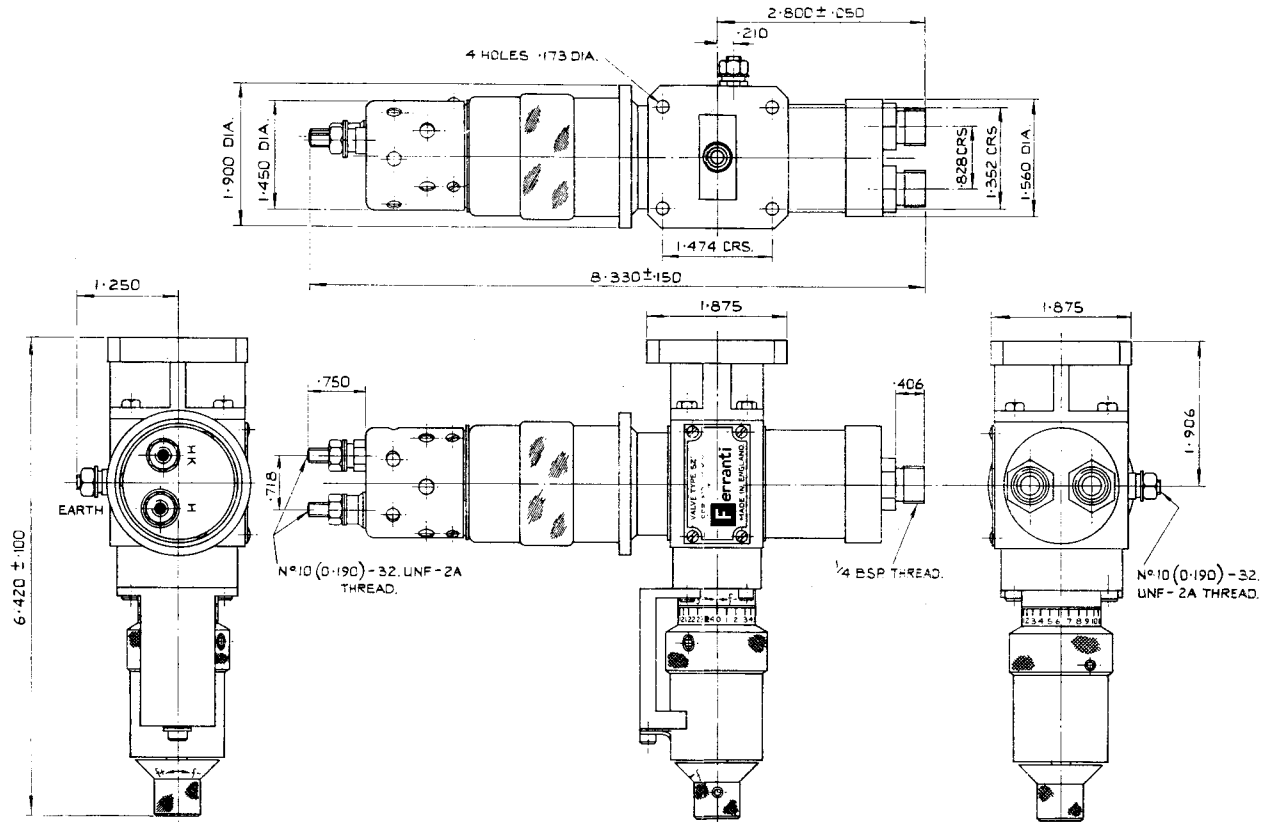
‡The operating frequency required should be specified when ordering.

§To avoid microphony due to turbulence in water channels.



Typical Power Output and Frequency/Anode Voltage Characteristics.



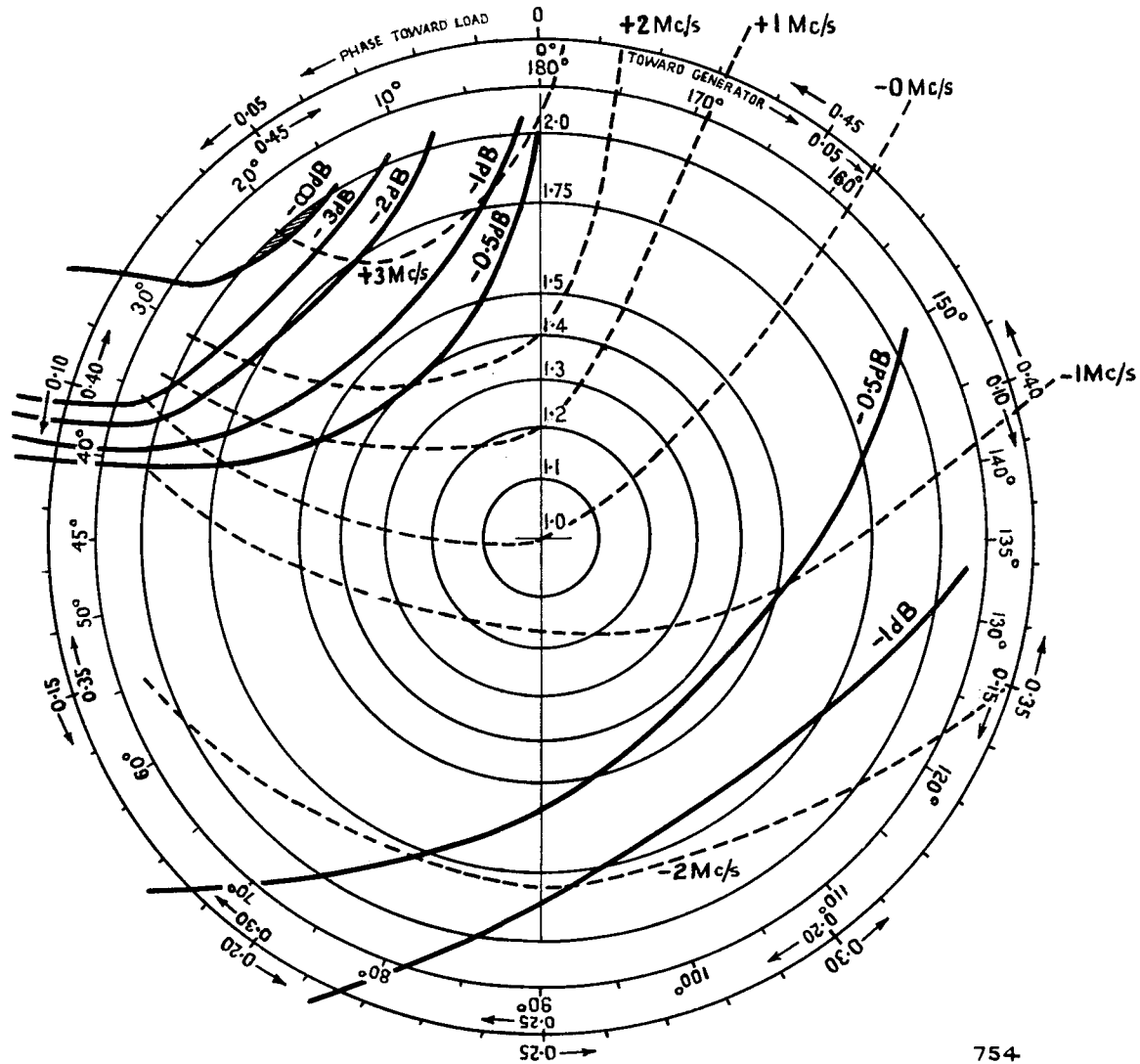


Dimensions in inches.
(Nominal unless otherwise stated.)



SZ31

RIEKE DIAGRAM



754

