Ferranti

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 millisecs. duration produces no detectable frequency variation.

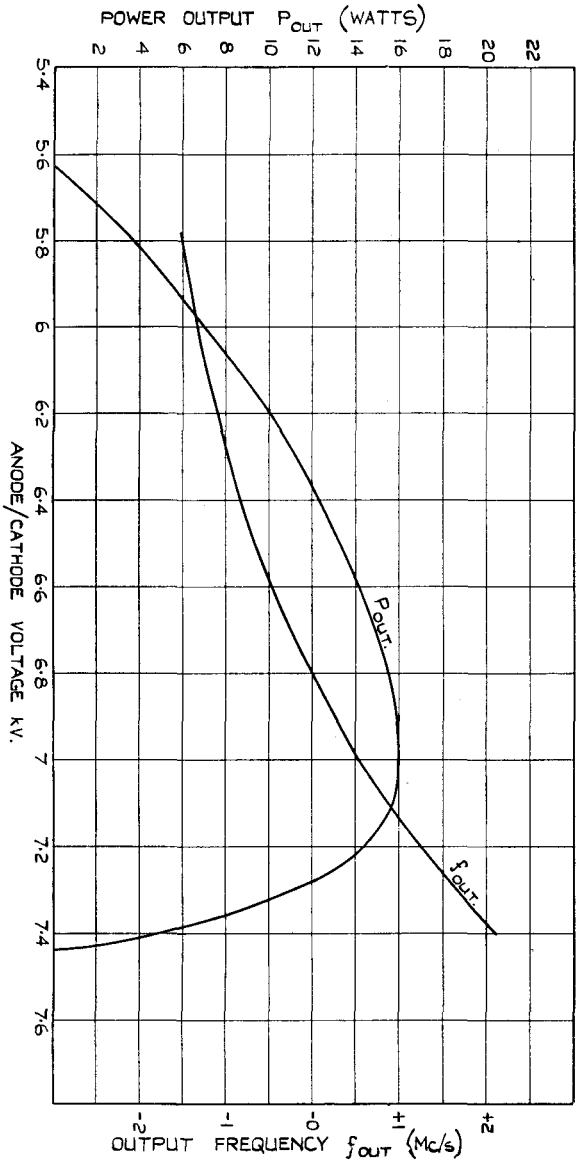
*Bolts to UG40A/U Choke flange.
‡The operating frequency required should be specified when ordering.
§To avoid microphony due to turbulence in water channels.

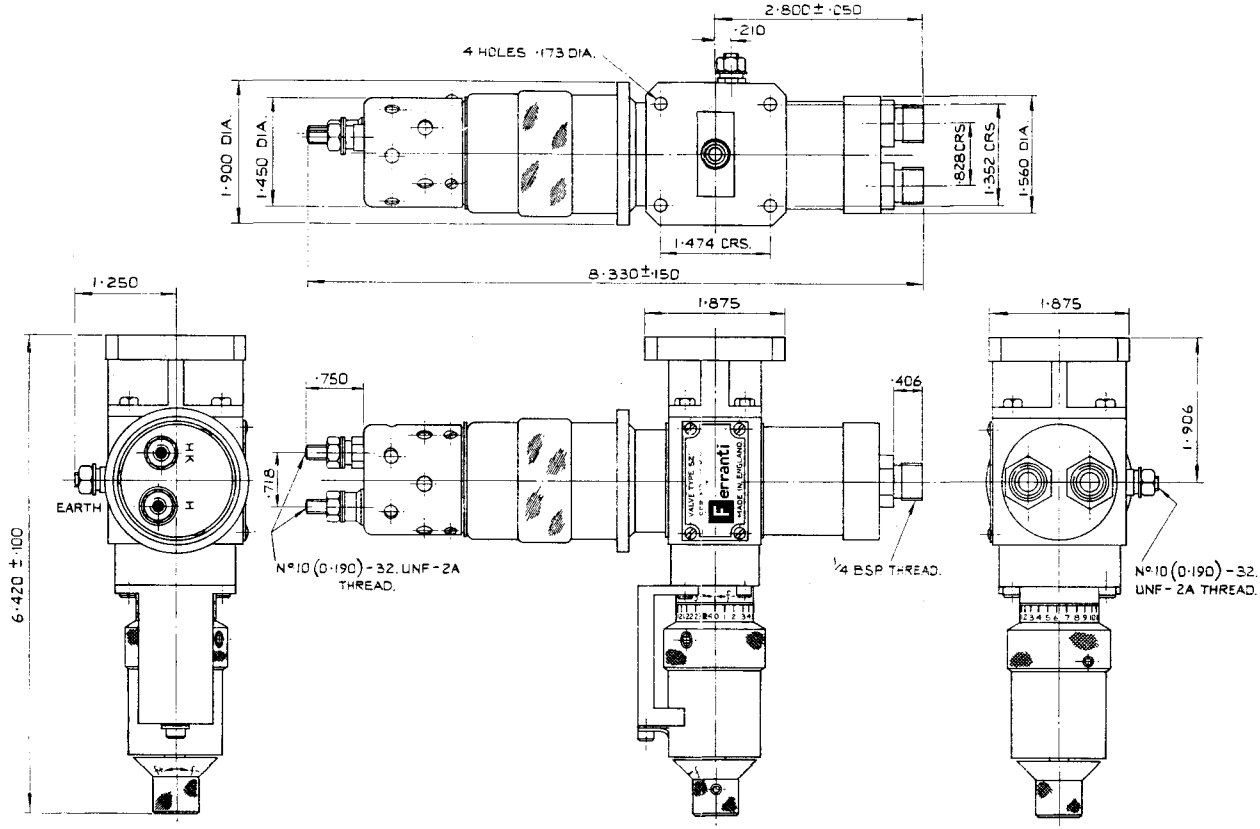
Ferranti

Issue 1.
Sept.,1961

Ferranti

Typical Power Output and Frequency/Anode Voltage Characteristics.



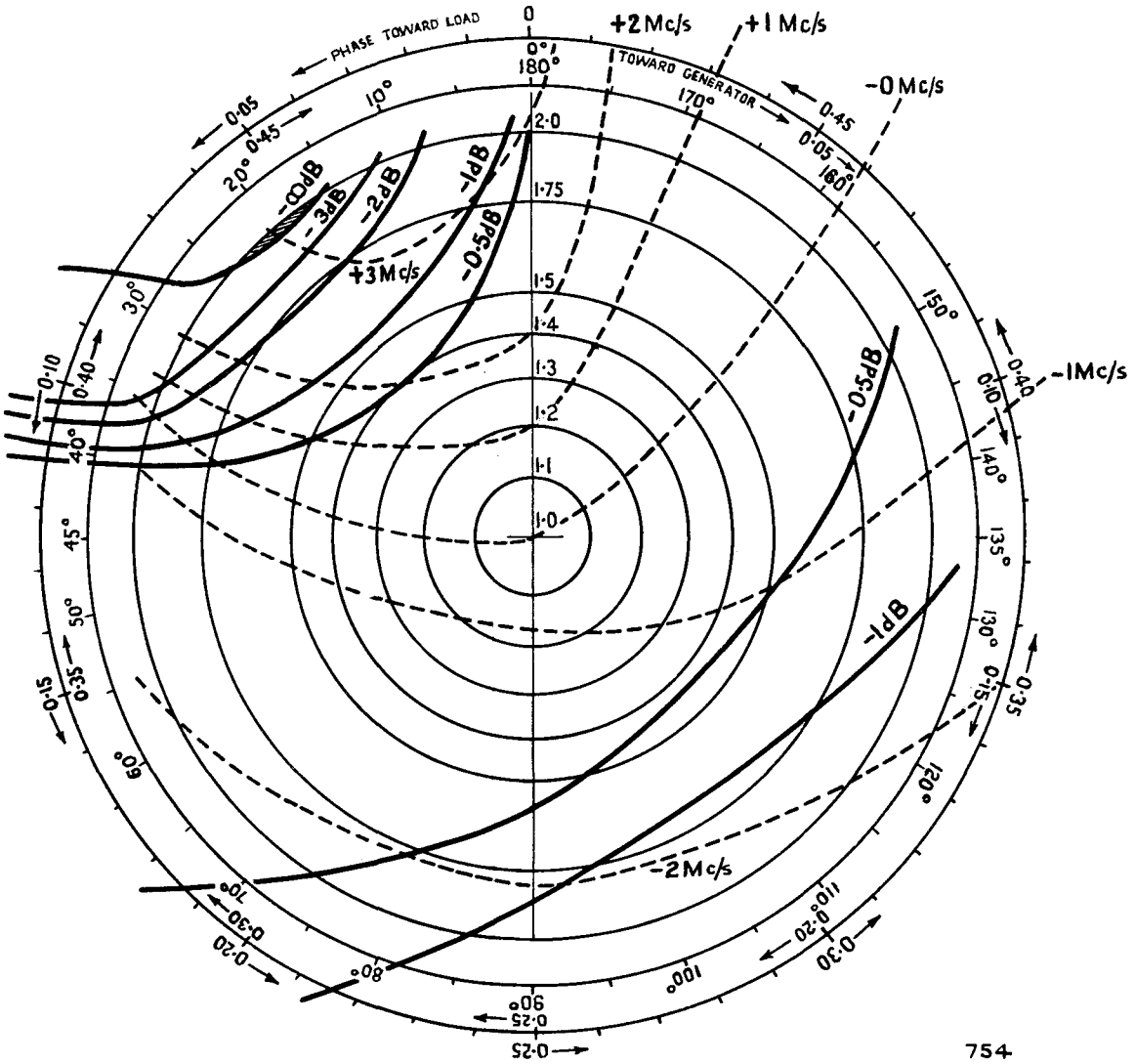


Dimensions in inches.
(Nominal unless otherwise stated.)

Issue 1
Sept., 1961

SZ31

RIEKE DIAGRAM



754

Ferranti