

TUNABLE MAGNETRON

JPT9-02

Tunable magnetron incorporating a permanent magnet system, for pulsed operation within the X-band.

PRELIMINARY DATA

This data should be read in conjunction with GENERAL OPERATIONAL RECOMMENDATIONS—MICROWAVE DEVICES included in this volume of the handbook.

FREQUENCY RANGE 9150 to 9600 Mc/s
Mechanical tuning is effected by a single control.

CATHODE

Indirectly heated

V_h	6.3	V
I_h	1.1	A

Heating time. The heater voltage shall be applied at least two minutes before the application of h.t. voltage.

COOLING

Maximum temperature of anode block 140 °C

LIMITING VALUES (absolute ratings)

Anode pulse current		
Maximum	120	mA
Minimum	20	mA
Maximum anode pulse input power	120	W
Maximum mean anode input power	6.0	W
Maximum duty cycle	0.05	
Maximum pulse duration	5.0	µs
Maximum rate of rise of voltage pulse	20	kV/µs

CHARACTERISTICS

Maximum anode pulse voltage range ($I_a = 120\text{mA}$)	950 to 1150	V
Frequency pulling (for v.s.w.r. = 1.5)	<20	Mc/s
Frequency pushing	<1	Mc/s per mA
Minimum output pulse power ($f = 9150$ to 9600Mc/s)	18	W

TYPICAL OPERATION

Frequency	9200	9400	9550	Mc/s
Anode pulse current	120	120	120	mA
Anode pulse voltage	1.0	1.0	1.0	kV
Pulse duration	0.5	0.5	0.5	µs
Pulse repetition frequency	1000	1000	1000	p/s
R.F. power output during pulse	22	25	24	W

WEIGHT

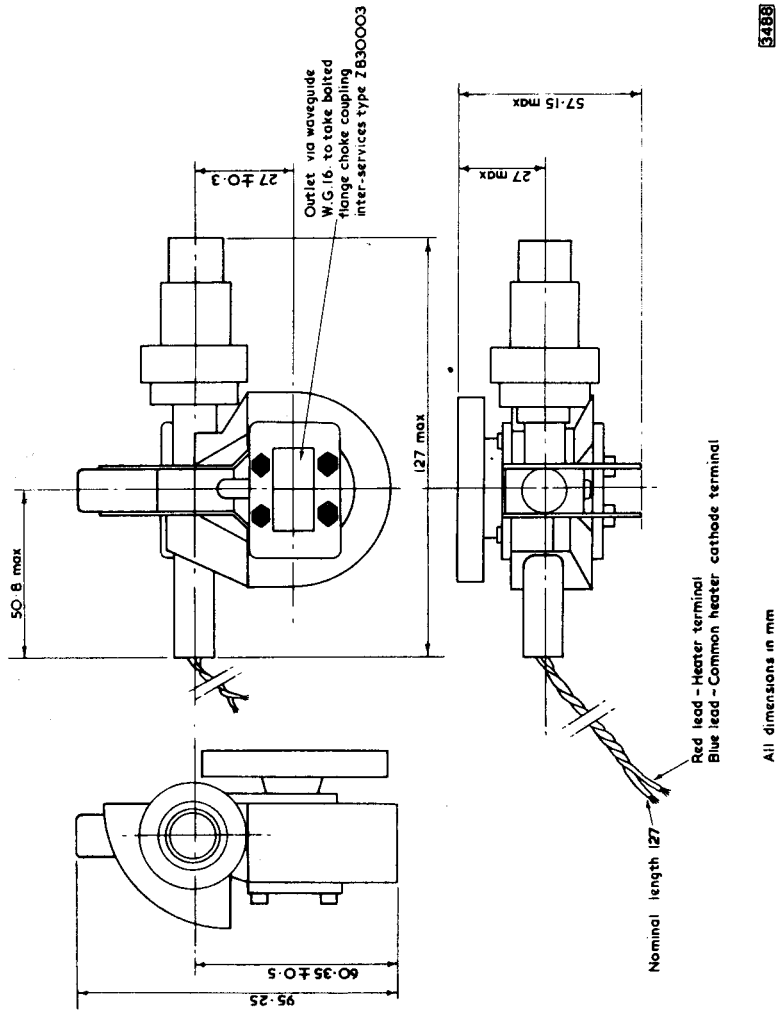
Valve only		1.5	lb
		710	g
Shipping weight		2.5	lb
		1.16	kg
Dimensions of packing	127 × 178 × 190		mm



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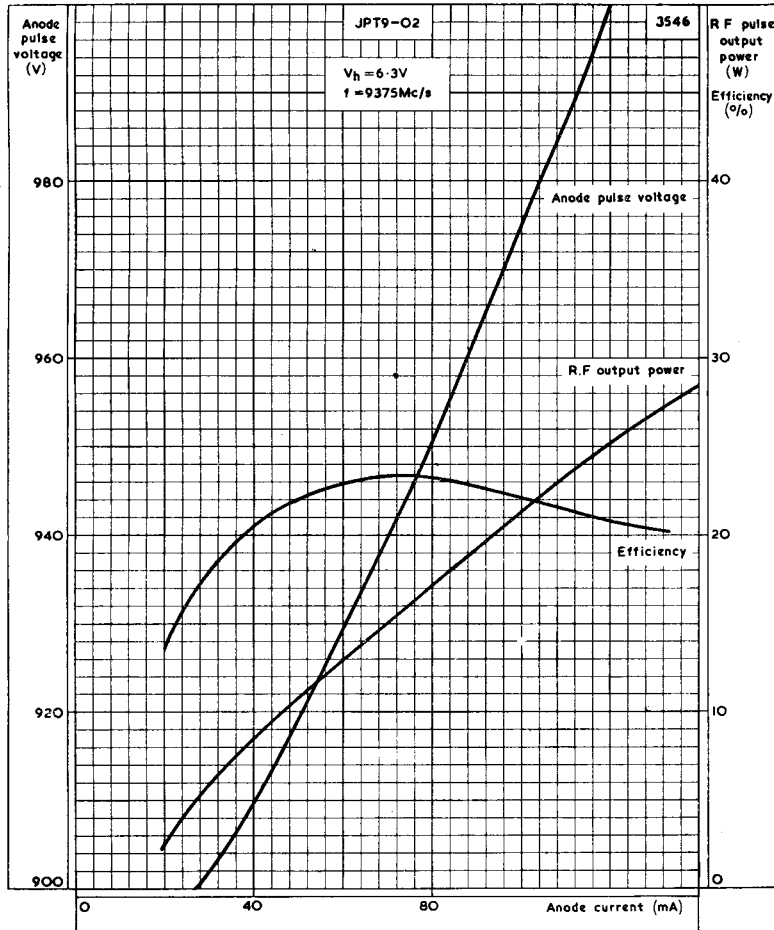
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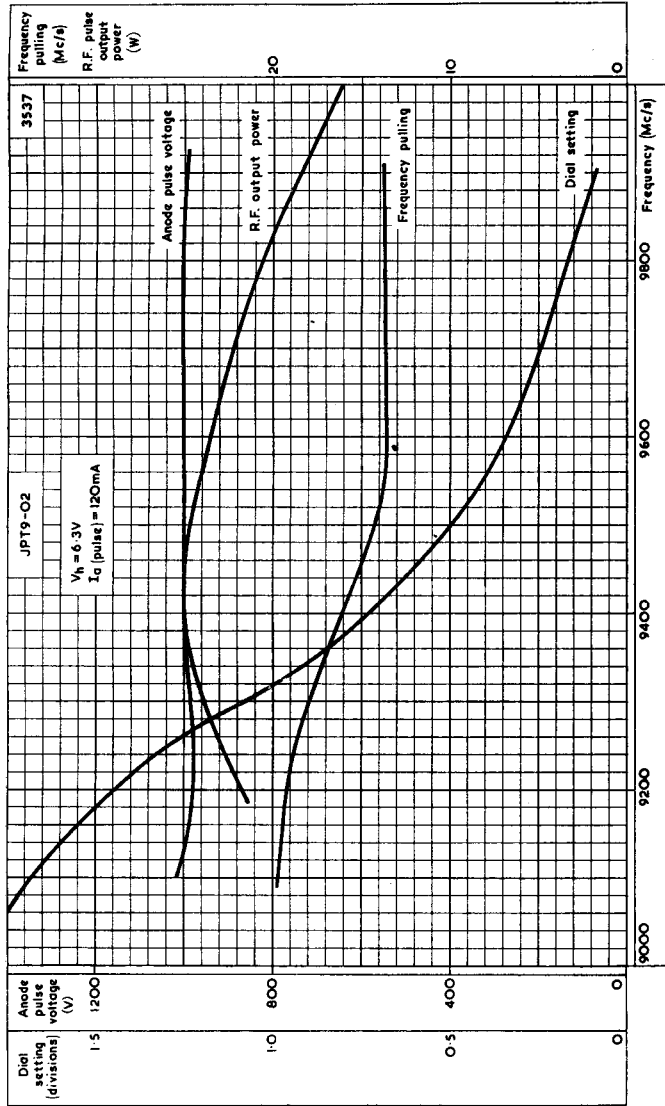
ANODE PULSE VOLTAGE, R.F. PULSE OUTPUT POWER AND EFFICIENCY PLOTTED AGAINST ANODE CURRENT



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ANODE PULSE VOLTAGE, R.F. PULSE OUTPUT POWER, DIAL SETTING AND FREQUENCY PULLING PLOTTED AGAINST FREQUENCY