

MECHANICAL DATA

Base	A4-76, Peewee 4 Pin
Cap	C1-3, Skirted Miniature
Cooling	Convection and Conduction.
	Contact rings are to make direct peripheral contact with metallic parts of the external cavity.
Mounting Position	Any
Connections:	
Pin 1 — Control Electrode	Lower Contact Ring — 1st Resonator
Pin 2 — Heater	Upper Contact Ring — 2nd Resonator
Pin 3 — Cathode	Cap — Reflector
Pin 4 — Heater	

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage, AC or DC ($\pm 10\%$)	6.3 Volts
Heater Current	650 Ma

RATINGS (Absolute Values)

Resonator Voltage	350 Volts	dc Max.
Resonator Current	29 Ma	dc Max.
Reflector Voltage	-700 Volts	dc Max.
	-15 Volts	dc Min.
Control Electrode Voltage	+1 Volt	dc Max.
	-500 Volts	dc Max.
Heater-Cathode Voltage	± 45 Volts	dc Max.
Power Input	10 Watts	Max.
Seal Temperature	175°C	Max.

GENERAL

Reflector Mode	1-3/4	2-3/4	3-3/4
Frequency	2300	3000	3800 Mc
	550	1100	1500 Mc

TYPICAL OPERATION

CW Oscillator

Reflector Mode	1-3/4	2-3/4	3-3/4
Cavity Mode	3/4	3/4	5/4
Frequency	1500	2200	3000 Mc
Resonator Voltage	325	300	325 Volts
Cathode Current	18	15	18 Ma
Reflector Voltage (approx.)	-235	-200	-250 Volts
Control Electrode			
(Full Power Output)	-300	-300	-300 Volts
Power Output	175	70	50 Mw
Electronic Tuning Range			
(Between Half Power Points)	6	6	6 Mc

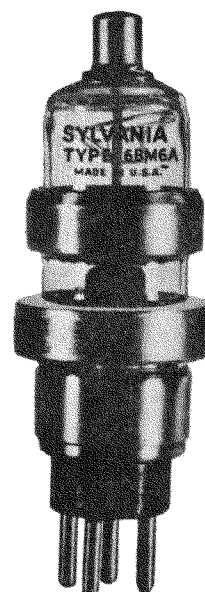
Pulse Modulated Oscillator

For pulse operation, the general conditions are the same except as noted below:
The peak power output with the tube modulated by the control electrode is not more than 1.5 db below the cw output within the rated frequency range.

Control Electrode Voltage	-300 Volts
Pulse Modulation Voltage	+300 Volts
Pulse Repetition Rate	40-4000 PPS
Minimum Pulse Duration	0.5 μ sec.
Rise Time	0.1 μ sec.
Decay Time	0.1 μ sec.
Jitter	.15 μ sec.

QUICK REFERENCE DATA

The Sylvania Type 6BM6A is a broadband reflex klystron, 550 to 3800 Mc. It is designed for service as a CW or pulse modulated oscillator using an external cavity.



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APPLICATION DATA

The Sylvania 6BM6A is a broadband reflex klystron designed for cw or pulsed operation in conjunction with external cavity resonators. This tube operates over the range from 1500 to 3000 Mc in three modes. The 6BM6A is particularly adapted for use in signal generators, spectrum analyzers or local oscillator applications where broadband frequency coverage is needed.

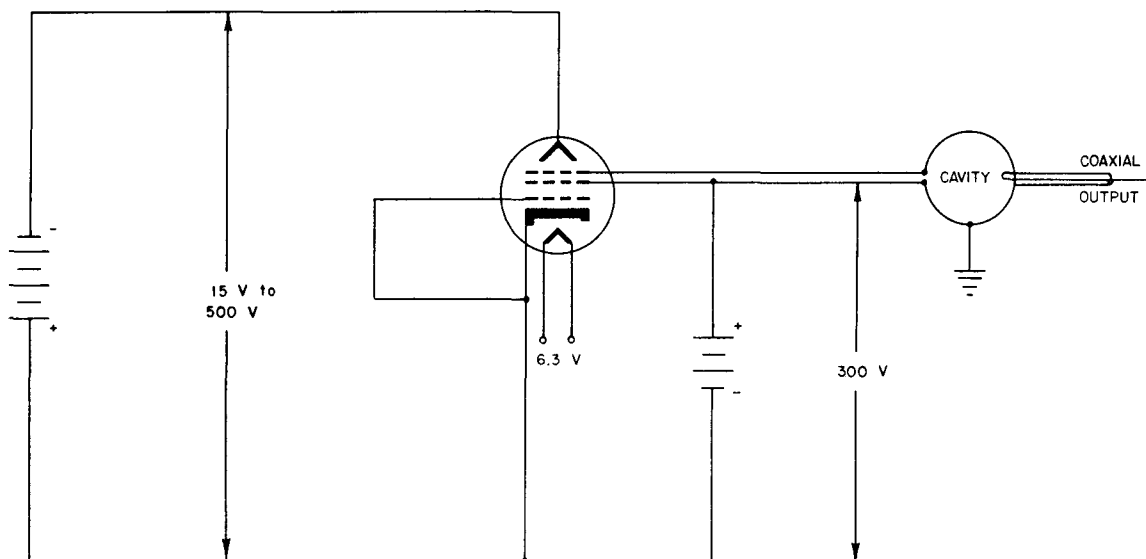


FIG. 1 — CW OSCILLATOR CIRCUIT EMPLOYING THE 6BM6A REFLEX KLYSTRON

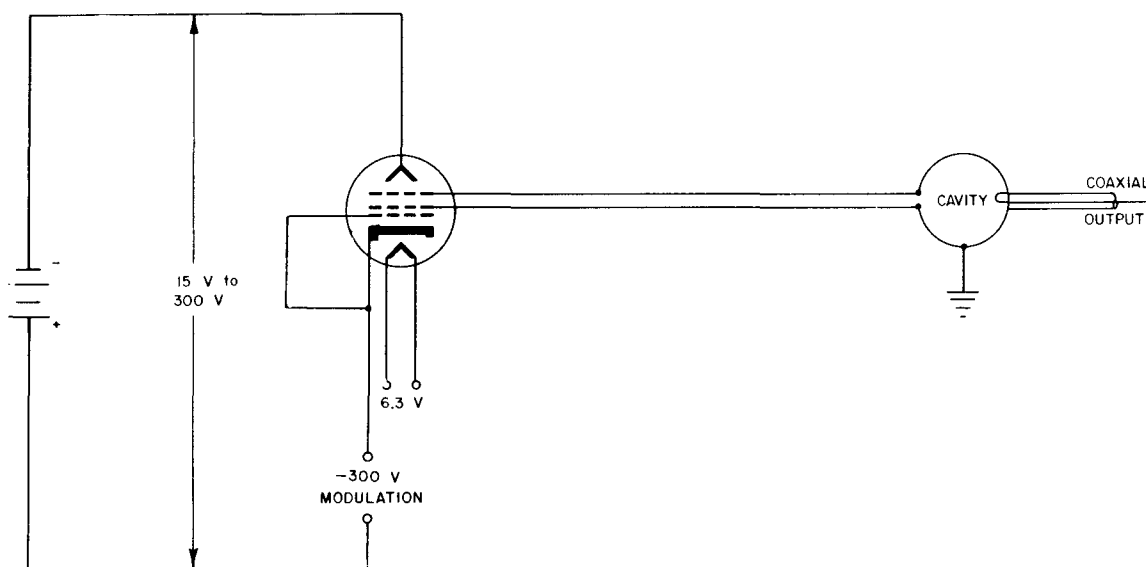
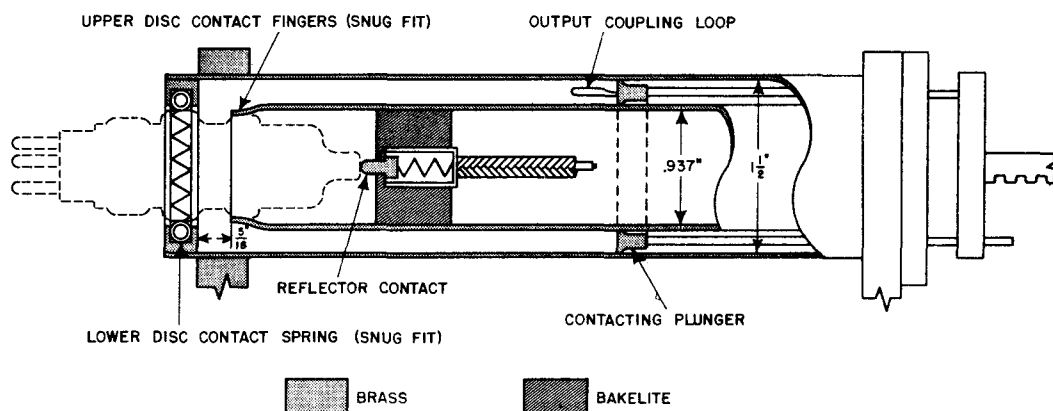


FIG. 2 — PULSE MODULATED OSCILLATOR CIRCUIT EMPLOYING THE 6BM6A REFLEX KLYSTRON

APPLICATION DATA

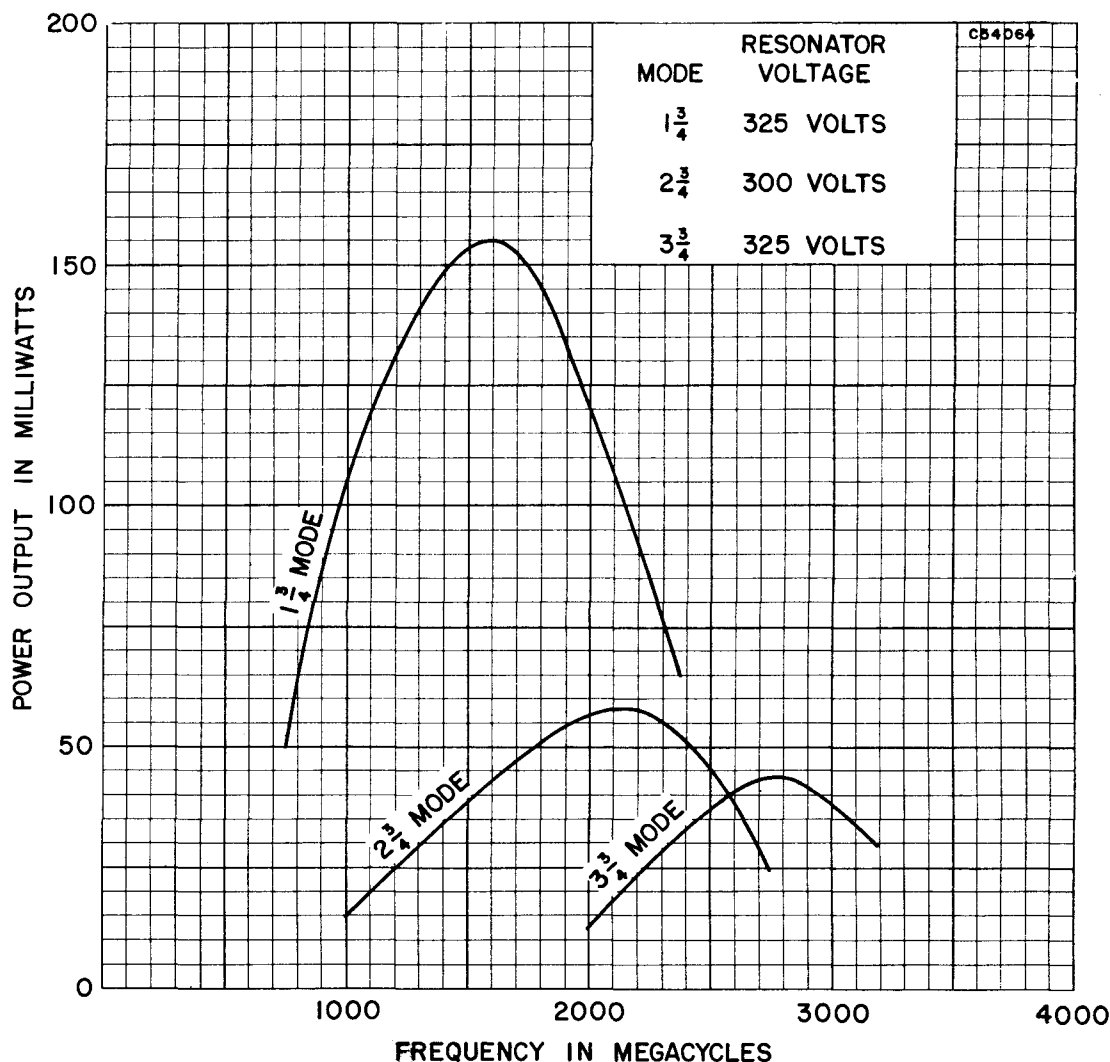


Recess in Contact Plunger 1/2" Loop Size for 3000-5000 mc 9/32"
Loop Size for 800-3500 mc 9/16" Loop Width for Both Ranges 175"

The length is determined by the frequency of operation and the range of plunger motion is set by the frequency band to be covered.

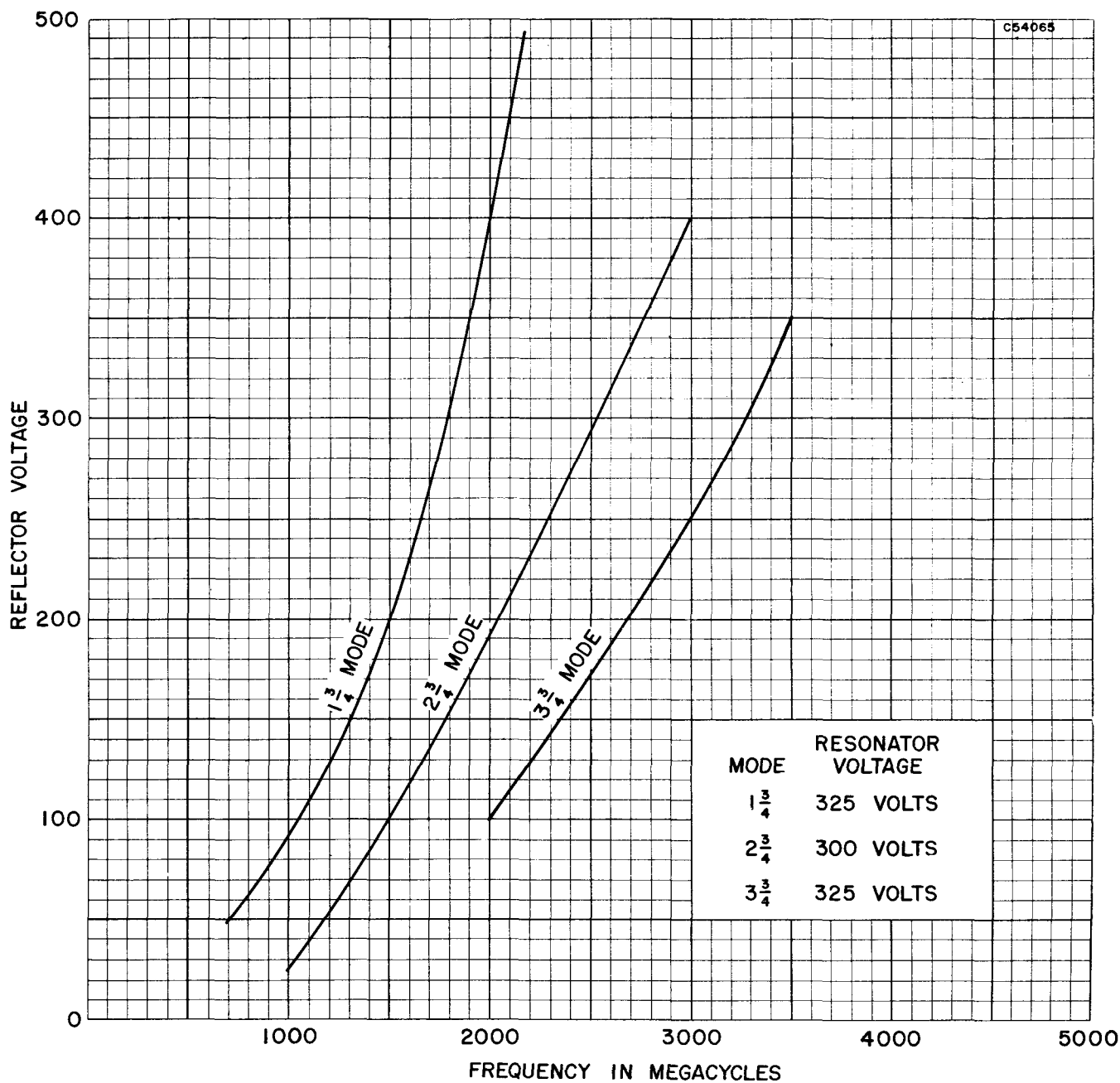
AVERAGE CHARACTERISTICS

FIG. 3 — DIAGRAM OF A TYPICAL COAXIAL CAVITY FOR USE WITH THE 6BM6A REFLEX KLYSTRON



6BM6A

AVERAGE CHARACTERISTICS



OUTLINE DRAWING

