

**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 ( $\pm 8\%$ ) . . . . . 6.3 Volts  
 Heater Current . . . . . 750 Ma

**RATINGS (Absolute Values)**

Resonator Voltage . . . . .	350 Volts	dc Max.
Resonator Current . . . . .	35 Ma	dc Max.
Reflector Voltage . . . . .	-700 Volts	dc Max.
	-15 Volts	dc Min.
Control Electrode Voltage . . . . .	+20 to -150 Volts	dc Max.
Control Electrode Current . . . . .	12 Ma	Max.
Heater Cathode Voltage . . . . .	$\pm 45$ Volts	dc Max.
Power Input . . . . .	12 Watts	Max.
Seal Temperature . . . . .	175°C	Max.

**GENERAL**

Reflector Mode . . . . .	1-3/4	2-3/4	3-3/4
Frequency . . . . .	4000	4500	6500 Mc
	1600	2100	3600 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 . . . . .	2800	3200	5000 Mc
Resonator Voltage . . . . .	325	325	325 Volts
Cathode Current . . . . .	28	26	25 Ma
Reflector Voltage (approx.) . . . . .	-220	-120	-220 Volts
Control Electrode Voltage (Full Power Output) . . . . .	+10	+10	+10 Volts
Power Output Cutoff Voltage . . . . .	+3	+3	+3 Volts
Electronic Tuning Range (Between Half Power Points) . . . . .	6	6	6

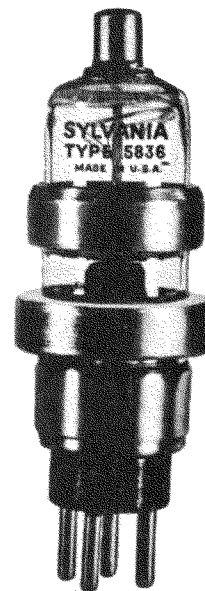
**Pulse Modulated Oscillator**

For pulse operation, the general conditions are the same except as shown 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 . . . . .	-10 Volts
Pulse Modulation Voltage . . . . .	+20 Volts
Pulse Repetition Rate . . . . .	40-4000 PPS
Minimum Pulse Duration . . . . .	0.5 $\mu$ sec.
Rise Time . . . . .	0.1 $\mu$ sec.
Decay Time . . . . .	0.1 $\mu$ sec.
Jitter . . . . .	0.15 $\mu$ sec.

**QUICK REFERENCE DATA**

The Sylvania Type 5836 is a broadband reflex klystron designed for service as a CW or pulse modulated oscillator in conjunction with external cavity resonators. The 5836 operates over the range from 1600 to 6500 Mc.



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APPLICATION DATA

The Sylvania Type 5836 is a broadband reflex klystron designed for cw or pulsed operation in conjunction with external cavity resonators. This tube operates over the range from 1600 to 6500 Mc in three modes. The 5836 is particularly adapted for use in signal generators, spectrum analyzers, or local oscillator applications where broadband frequency coverage is needed.

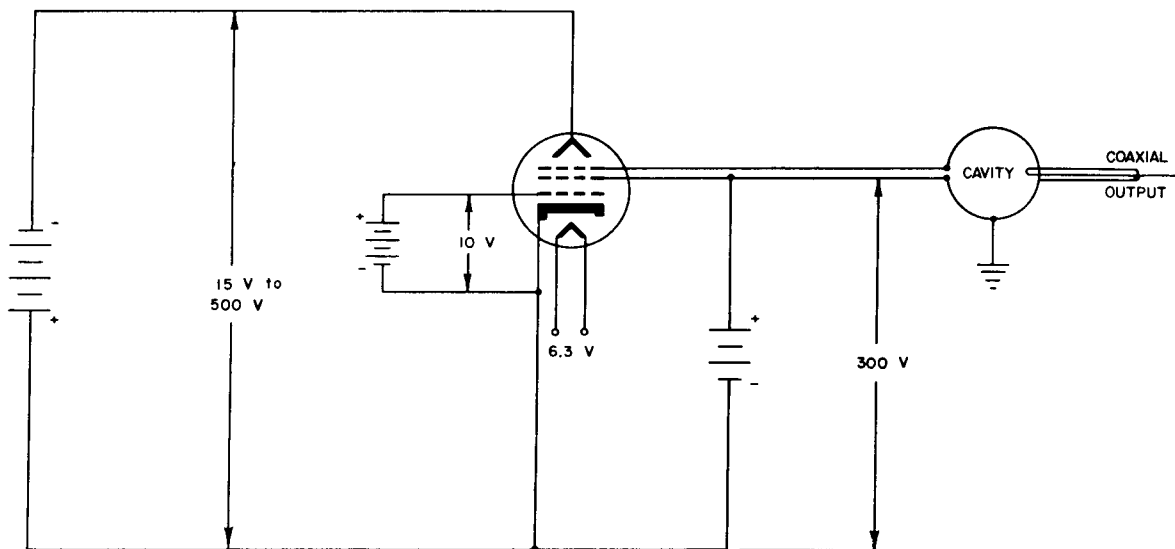


FIG. 1 — CW OSCILLATOR CIRCUIT EMPLOYING THE 5836 REFLEX KLYSTRON

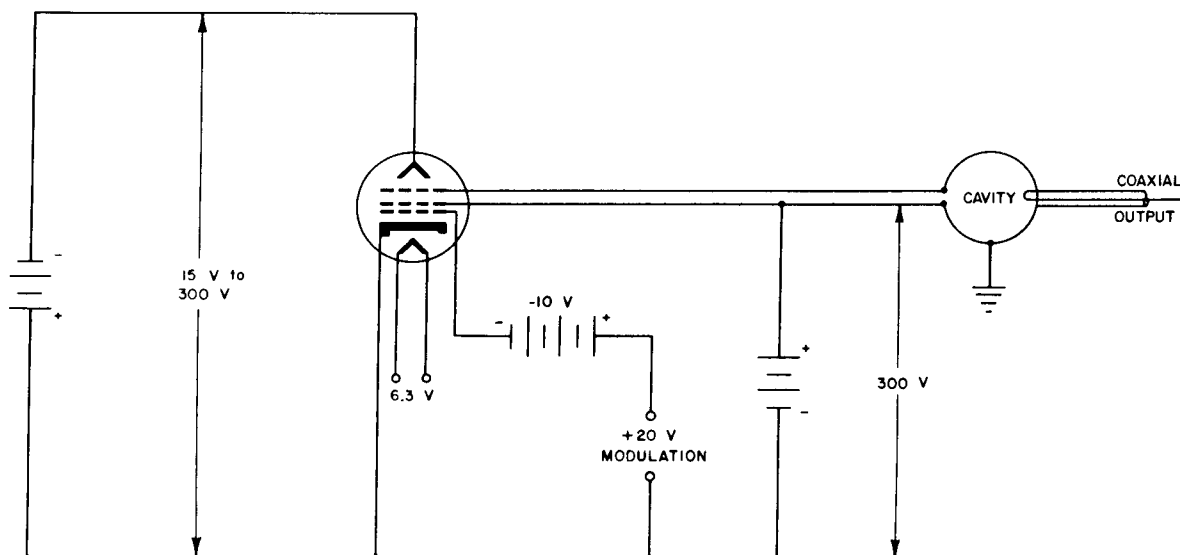
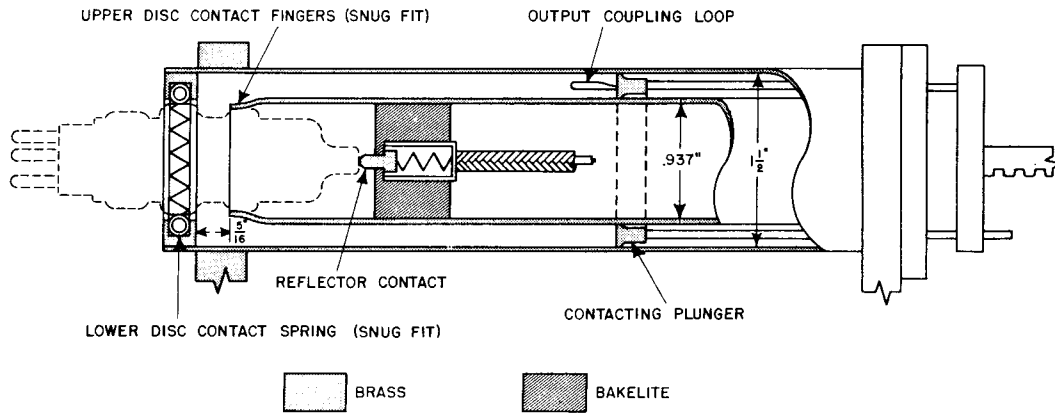


FIG. 2 — PULSE MODULATED OSCILLATOR CIRCUIT EMPLOYING THE 5836 REFLEX KLYSTRON

APPLICATION DATA

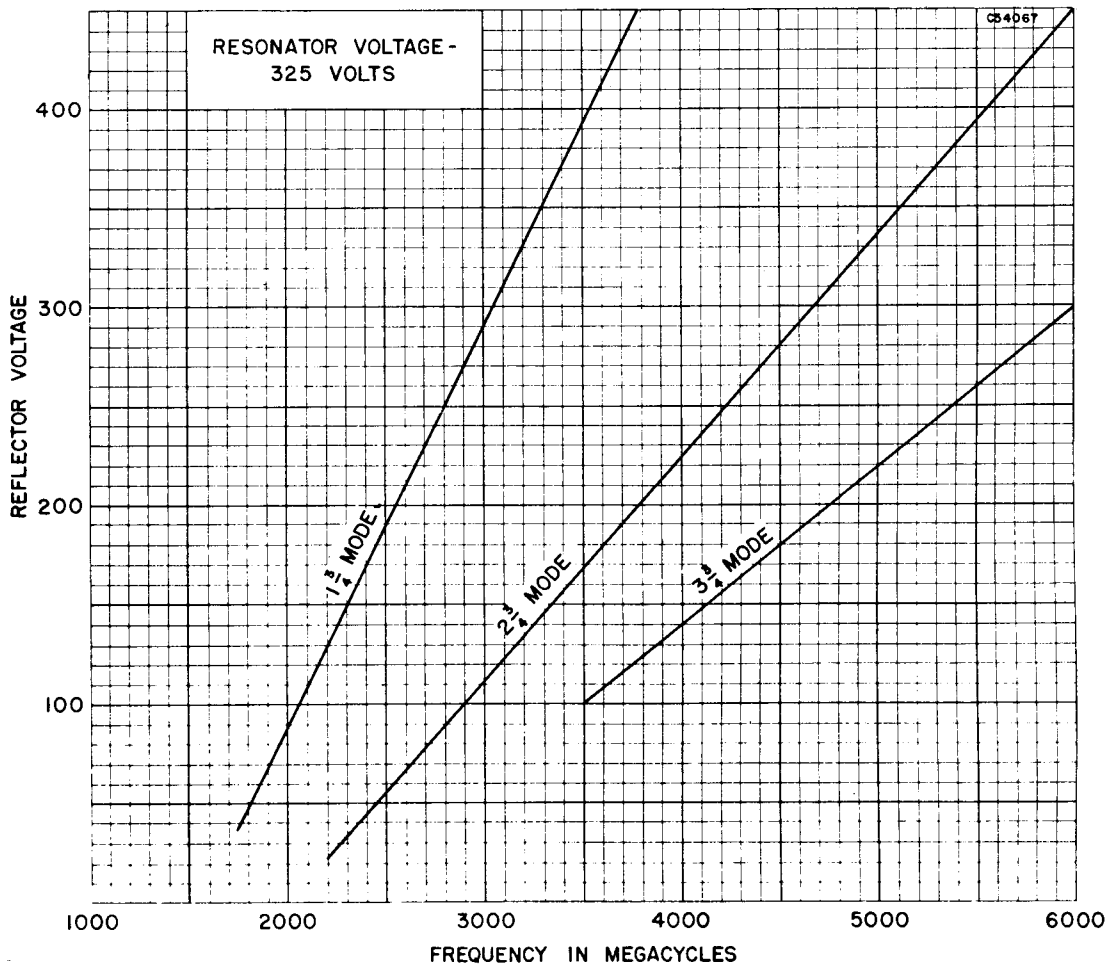


Recess in Contact Plunger . . . . . 1/2"      Loop Size for 3000-5000 mc . . . . . 9/32"  
 Loop Size for 800-3500 mc . . . . . 9/16"      Loop Width for Both Ranges . . . . . .175"

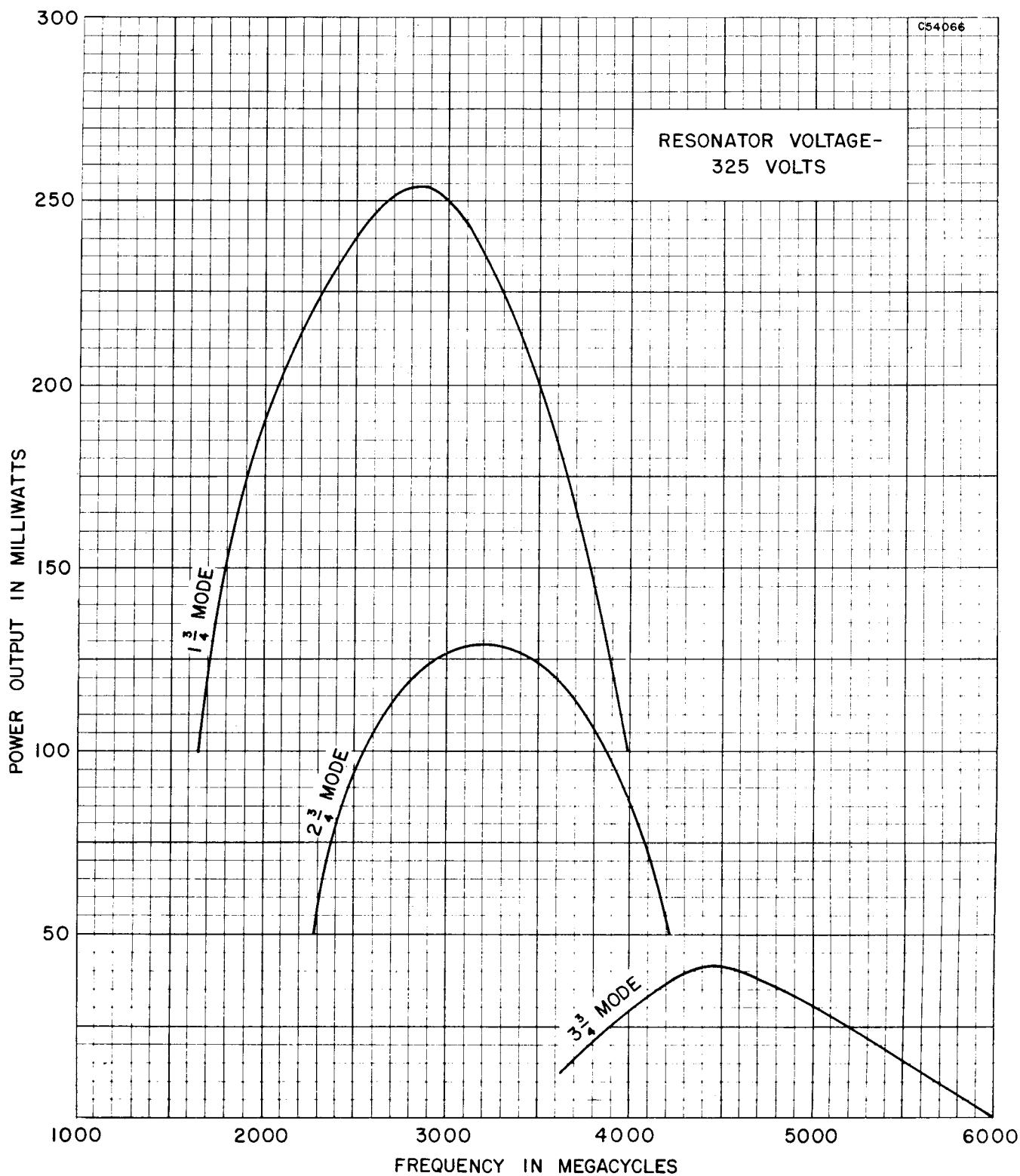
The length is determined by the frequency of operation and the range of plunger motion is set by the frequency band to be covered.

FIG. 3 — DIAGRAM OF A TYPICAL COAXIAL CAVITY FOR USE WITH THE 5836 REFLEX KLYSTRON

AVERAGE CHARACTERISTICS



AVERAGE CHARACTERISTICS



OUTLINE DRAWING

