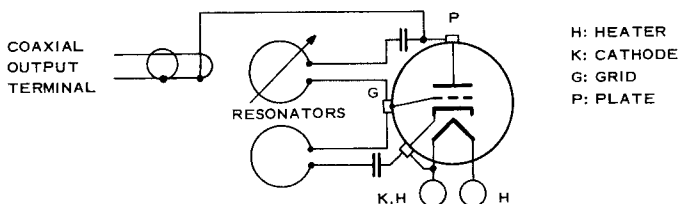


TUNG-SOL**TRIODE OSCILLATOR**

THE 7533 IS AN INTEGRAL-CAVITY OSCILLATOR ASSEMBLY DESIGNED FOR TRANSMITTING SERVICE IN BATTERY POWERED RADIOS ONDES OPERATING NEAR 1680 MC/S. IT INCORPORATES A PENCIL TRIODE WITH UNUSUALLY LOW HEATER POWER BATTERY DRAIN, RELATIVELY HIGH PLATE CIRCUIT EFFICIENCY, LOW FREQUENCY DRIFT AND A WEIGHT OF ONLY 0.8 OUNCES. THE OUTPUT FREQUENCY CAN BE ADJUSTED BETWEEN 1660 AND 1700 MC/S BY MEANS OF 2 ADJUSTMENT SCREWS POSITIONED IN THE PLATE RESONATOR. THE CATHODE RESONATOR IS PRE-TUNED FOR UNIFORM POWER OUTPUT OVER THE TUNEABLE FREQUENCY RANGE. THE COAXIAL TERMINAL IS LOOP COUPLED TO THE PLATE RESONATOR.

MECHANICAL DATA**TERMINAL CONNECTIONS**

PHYSICAL DIMENSIONS

SEE OUTLINE AND NOTES

ELECTRICAL DATA
HEATER CHARACTERISTICS AND RATINGS
 ABSOLUTE MAXIMUM SYSTEM - SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	6.0	VOLTS	160	MA.
LIMITS OF APPLIED VOLTAGE			5.2 TO 6.6	VOLTS

MAXIMUM RATINGS

ABSOLUTE MAXIMUM SYSTEM - SEE EIA STANDARD RS-239

FOR ALTITUDES UP TO 100,000 FEET

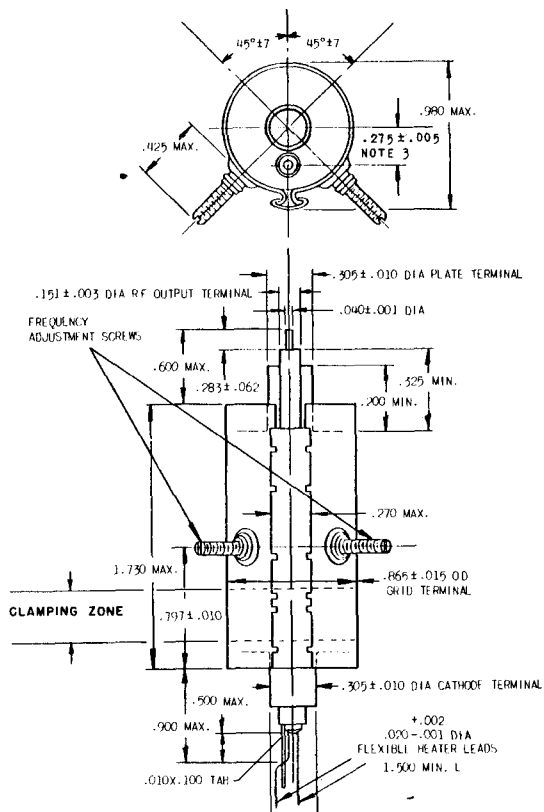
DC PLATE-TO-GRID VOLTAGE	130	VOLTS
PLATE DISSIPATION	3.6	WATTS
PLATE INPUT	4	WATTS
DC PLATE CURRENT	34	MA.
DC GRID CURRENT	8	MA.
AMBIENT TEMPERATURE	-55 TO +75	°C

CONTINUED ON FOLLOWING PAGE

TUNG-SOL

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OUTLINE



DIMENSIONS IN INCHES

NOTES:

1. THE AXES OF THE INNER AND OUTER CONDUCTORS OF THE COAXIAL OUTPUT TERMINAL COINCIDE WITHIN $0.010''$.
2. THE END OF THE INSULATOR IN THE COAXIAL OUTPUT TERMINAL ALIGNS WITH THE EDGE OF THE OUTER CONDUCTOR ($0.151'' \pm 0.003''$ DIAMETER) WITHIN $0.005''$.
3. DISTANCE BETWEEN CENTERLINE OF PLATE TERMINAL AND CENTER LINE OF INNER CONDUCTOR ($0.040'' \pm 0.001''$ DIAMETER).

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TUNG-SOL

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OPERATION AS CLASS C OSCILLATOR

OPERATING FREQUENCY	1680	MC/S
CHARACTERISTICS IMPEDANCE OF COAXIAL OUTPUT TERMINAL (APPROX.)	50	Ω
DC PLATE SUPPLY VOLTAGE	117	VOLTS
GRID RESISTOR - ADJUSTED FOR STATED PLATE CURRENT AVG. VALUE	1500	Ω
DC PLATE CURRENT	27	MA.
DC GRID CURRENT	4.5	MA.
USEFUL POWER OUTPUT (APPROX.)	575	MW.

CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

	MIN.	MAX.	
TUNING RANGE	1660	1700	MC/S
LOAD ADJUSTED FOR VOLTAGE STANDING WAVE RATIO		1.1	
HEATER CURRENT AT $E_f = 5.2$ V.	135	157	MA.
GRID RESISTOR - SEE NOTE	1300	2400	Ω
USEFUL POWER OUTPUT AT $E_f = 5.2$ V., $E_{bb} = 95$ V.	250	-----	MW.

SPECIAL TESTS AND PERFORMANCE DATA

CONTROLLED ON A SAMPLING BASIS

LOW-PRESSURE VOLTAGE BREAKDOWN TEST

HIGH-FREQUENCY VIBRATION TEST

MILITARY SPECIFICATIONS SHORTS AND CONTINUITY TEST PERFORMED ON ALL DEVICES

TEMPERATURE-FREQUENCY PERFORMANCE

5 HOUR RADIOSONDE LIFE PERFORMANCE TEST

NOTE:

ADJUSTED TO GIVE PLATE CURRENT AS CLOSE AS POSSIBLE, BUT NOT EXCEEDING 33 MA.
 OPERATE WITH $E_f = 6.6$ V., $E_{bb} = 117$ V., PLATE LOAD RESISTANCE OF 50Ω , FREQUENCY
 ADJUSTED TO 1660 ± 3 , -1 MC/S.