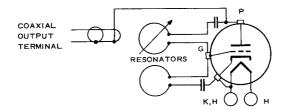
TRIODE OSCILLATOR

THE 7533 IS AN INTEGRAL-CAVITY OSCILLATOR ASSEMBLY DESIGNED FOR TRANSMITTING SERV-ICE IN BATTERY POWERED RADIOSONDES OPERATING NEAR 1680 MC/S. IT INCORPORATES A PEN-CIL 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 OUT-PUT 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



H: HEATER

K: CATHODE G: GRID

P: PLATE

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

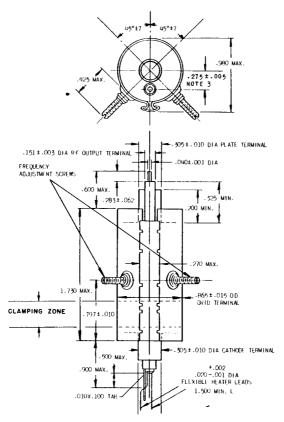
DC PLATE-TO-GRID VOLTAGE	130	VOLTS
PLATE DISSIPATION	3.6	WATTS
PLATE INPUT	4	WATTS
DC PLATE CURRENT	34	MA.
DC GRID CURRENT	8	MA.
AMBIENT TEMPERATURE	−55 TO +75	° C

CONTINUED ON FOLLOWING PAGE

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OUTLINE



DIMENSIONS IN INCHES

NOTES

- 1. THE AXES OF THE INNER AND OUTER CONDUCTORS OF THE COAXIAL OUTPUT TERMINAL COINCIDE WITH-IN 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).

TUNG-SOL -

CONTINUED FROM PRECEDING PAGE

OPERATION AS CLASS C OSCILLATOR

OPERATING FREQUENCY	1680	MC/S
CHARACTERISTICS IMPEDANCE OF		
COAXIAL OUTPUT TERMINAL (APPROX.)	50	Ω
DC PLATÉ 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 Ef = 5.2 V.	135	157	MA.
GRID RESISTOR - SEE NOTE	1300	2400	Ω
USEFUL POWER OUTPUT AT			
Ef = 5.2 V., Ebb = 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 Ef = 6.6 V., Ebb = 117 V., PLATE LOAD RESISTANCE OF 50 Ω , FREQUENCY ADJUSTED TO 1660+3, -1 MC/S.