TRIODE OSCILLATOR

THE 6562 IS AN INTEGRAL-CAVITY OSCILLATOR ASSEMBLY DESIGNED FOR TRANSMITTING SERVICE IN BATTERY POWERED RADIOSONDES 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 1668 AND 1692 MC/S BY MEANS OF AN ADJUSTMENT SCREW 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

COAXIAL OUTPUT TERMINAL

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

LIMITS OF APPLIED VOLTAGE

160 MA.

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

120 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
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" ± 0.003" DIAMETER) WITHIN 0.005"

3. DISTANCE BETWEEN CENTER LINE OF PLATE TERMINAL AND CENTER LINE OF INNER CONDUCTOR (0.040" ± 0.001" DIAMETER).
OPERATION AS CLASS C OSCILLATOR

OPERATING FREQUENCY 1680 MC/S
CHARACTERISTICS IMPEDANCE OF COAXIAL OUTPUT TERMINAL (APPROX.) 50 Ω
DC PLATE SUPPLY VOLTAGE 105 VOLTS
GRID RESISTOR - ADJUSTED FOR STATED PLATE CURRENT AVG. VALUE 1800 Ω
DC PLATE CURRENT 25.5 MA.
DC GRID CURRENT 3.5 MA.
USEFUL POWER OUTPUT (APPROX.) 370 MW.

CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

<table>
<thead>
<tr>
<th>MIN.</th>
<th>MAX.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUNING RANGE</td>
<td>1658</td>
</tr>
<tr>
<td>LOAD ADJUSTED FOR VOLTAGE STANDING WAVE RATIO</td>
<td>1.1</td>
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<tr>
<td>HEATER CURRENT AT EF = 5.2 V.</td>
<td>135</td>
</tr>
<tr>
<td>GRID RESISTOR - SEE NOTE</td>
<td>1300</td>
</tr>
<tr>
<td>USEFUL POWER OUTPUT AT EF = 5.2 V., Ebb = 95 V.</td>
<td>300</td>
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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.