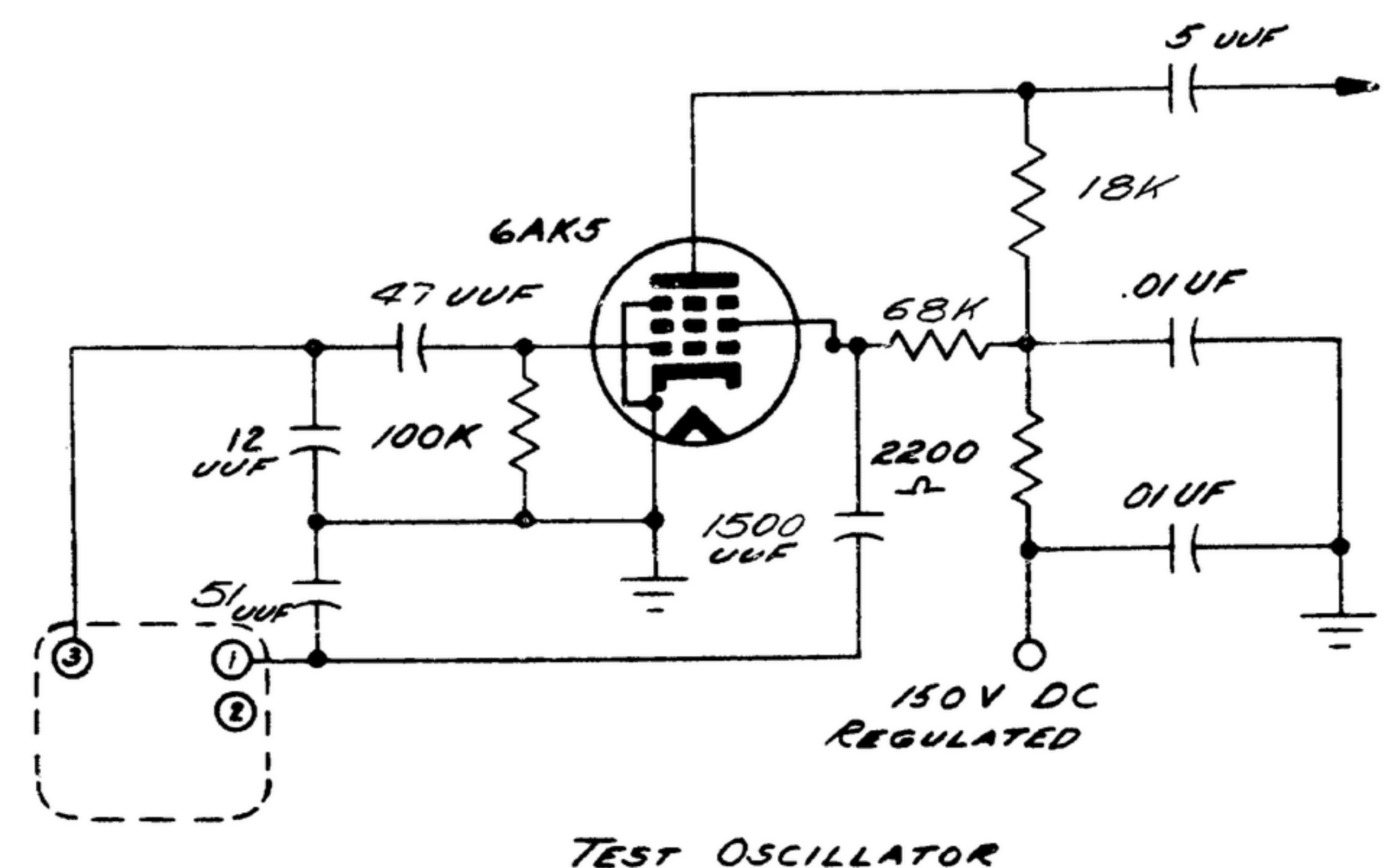


NOTICE: WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR THE CONSTRUCTION OF THIS DRAWING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE DATA AND FOR THE PROPER INTERPRETATION OF THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INTERPRETATION OF THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INTERPRETATION OF THE SAME.

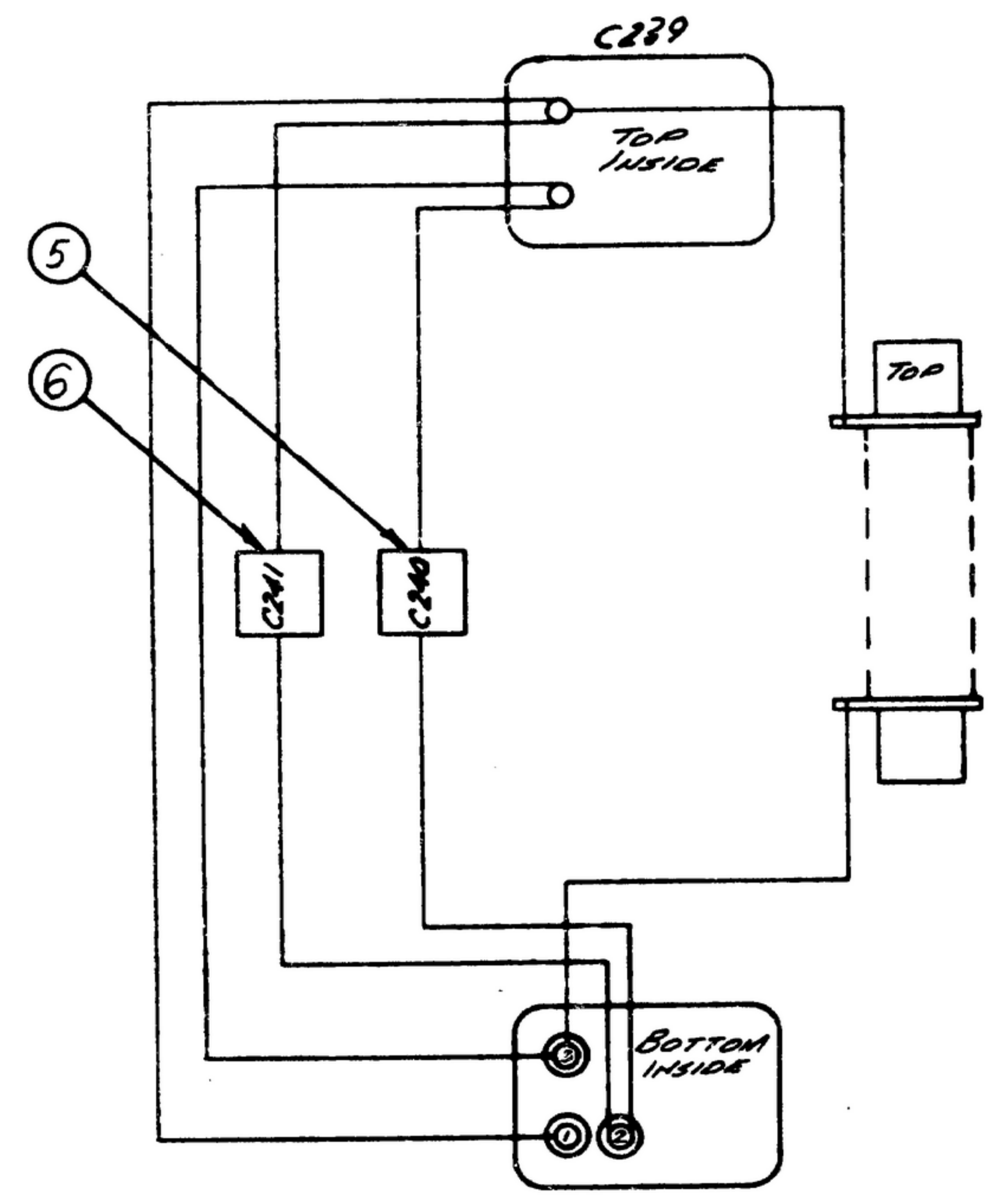
THIS DOCUMENT HAS BEEN APPROVED BY THE CONTRACTING OFFICE AND IS SUBJECT TO THE TERMS AND CONDITIONS OF THE CONTRACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INTERPRETATION OF THE SAME.

*FOR INFORMATION ONLY. CONTRACTOR MAY AT HIS OPTION DEVIATE FROM THESE PROCESS DETAILS.

| SYNOPSIS APPROVAL | | REVISIONS | | | |
|-------------------|----------|-----------|--------------------------------------|-------------|-----------|
| SYN | PR | SYN | DESCRIPTION | DATE | APPROVAL |
| A | A | A1 | ADDED ITEM # 8 | 20 NOV 59 | AI-51 |
| | | A2 | ITEM # 6 PART NO. WAS SM-C-28322G-2G | | |
| | | A3 | ITEM # 3 DESCRIPTION WAS "CAN-RF" | | |
| | | A4 | ADDED NEW APPL. | | |
| B | CA 84960 | B | B1-ADDED NOTE #11 | 16 NOV 60 | REV'D PHE |
| C1 | | C1 | 11% WAS ±.1% | 26 MAR 1965 | REV'D PHE |



TEST OSCILLATOR



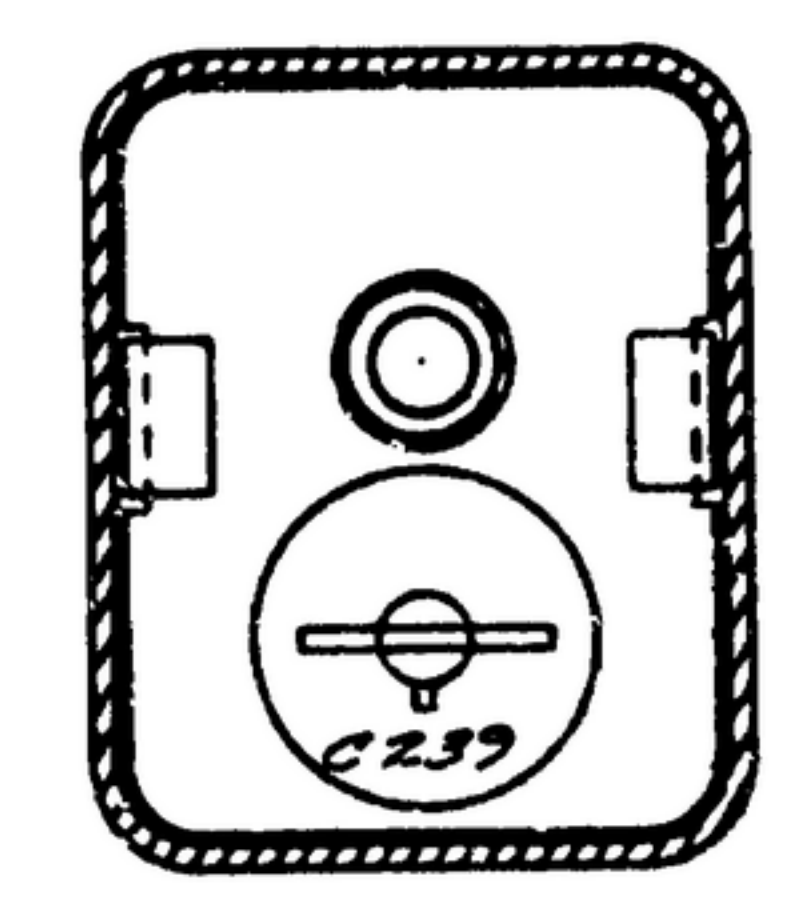
WIRING DIAGRAM

| CORE POSITION INCHES ±.0002 | TEST OSC FREQ MC | FREQ TOL KC | EFFECTIVE PARALLEL RESISTANCE (OHMS) ±.25% |
|-----------------------------|------------------|-------------|--|
| -0.0300 | 8.15 | 30 | |
| 0.0000 | 8.0 | 20 | 21000 |
| ± 0.0800 | 7.6 | 20 | |
| 0.1600 | 7.2 | 20 | |
| 0.2400 | 6.8 | 20 | |
| 0.3200 | 6.4 | 20 | |
| 0.4000 | 6.0 | 20 | 29000 |
| 0.4800 | 5.6 | 20 | |
| 0.5600 | 5.2 | 20 | |
| 0.6400 | 4.8 | 20 | |
| ± 0.7200 | 4.4 | 20 | |
| 0.8000 | 4.0 | 20 | 30000 |
| 0.8300 | 3.85 | 30 | |

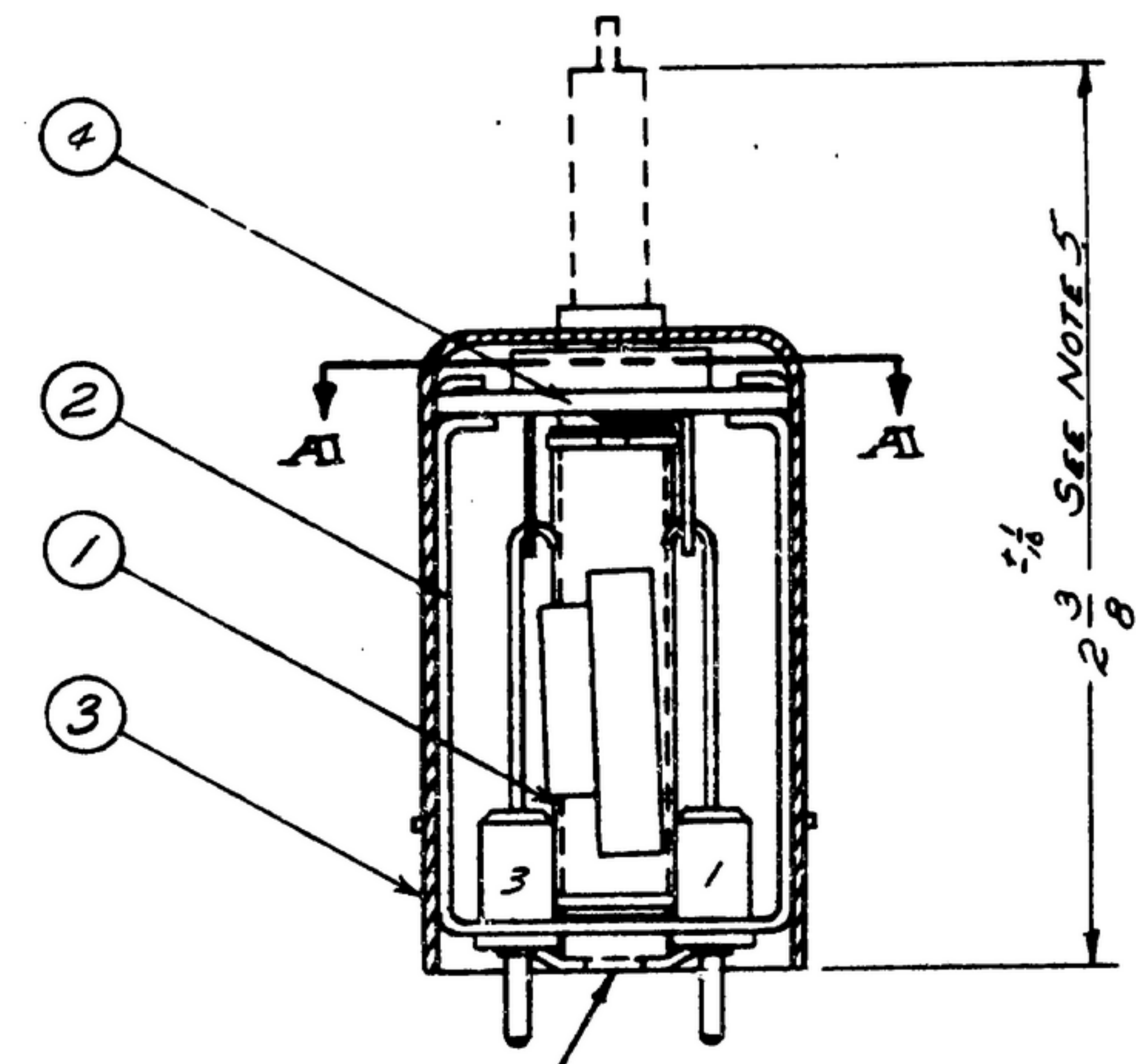
± ALIGNMENT POINTS SEE NOTE 4

- NOTES:
- SOFT SOLDER PER MIL-5-6872 USING ROSIN CORE SOLDER (B) COMP SN 60
 - COIL FORM OF COIL ASSY (1) TO BE CONCENTRIC WITH .140 DIA HOLE IN FRAME (2) WITHIN .020 T.I.R.
 - MOUNTING POSITION OF CAPACITORS OPTIONAL, PROVIDING NO CAPACITOR COMES WITHIN 1/16 OF COIL WINDING.
 - ALIGNMENT: WITH COIL ASSY IN TEST JIG, STANDARD POWDERED IRON TUNING CORE POSITIONED IN THE COIL, ADJUST VARIABLE CAPACITOR (A), UNTIL TEST OSCILLATOR FREQUENCY IS WITHIN 1000 CPS OF THE VALUE SHOWN IN TABLE AT THE TWO ALIGNMENT POINTS. THE FINAL SETTING OF THE VARIABLE CAPACITOR (A) SHALL LEAVE A RESERVE ADJUSTMENT OF 4 μM.F.
 - BROKEN LINES INDICATE OUTLINE OF STANDARD POWDERED IRON TUNING CORE OF TEST JIG. DIMENSION APPLIES TO THE CORE IN 0.0000 ALIGNMENT POSITION AFTER ELECTRICAL ALIGNMENT PER NOTE 4.
 - TRACKING: TEST OSCILLATOR FREQUENCY SHALL BE WITHIN THE TOLERANCE OF TABLE AT SPECIFIED CORE INSERTIONS AT 25°C.
 - STABILITY: THE RESONANT FREQUENCY OF THE TUNING COIL SHALL VARY NO MORE THAN 80 P.P.M./°C FROM THE 25°C VALUE OVER THE SPECIFIED TEMPERATURE RANGE.
 - TEMPERATURE RANGE - 40°C TO +85°C OPERATING, -62°C TO +85°C STORAGE.
 - THE COIL ASSY SHALL BE BONDED TO THE BASE PLATE AND TO THE VARIABLE CAPACITOR BOARD (A) TOP WITH BONDING AGENT (7) # R-313 AS SUPPLIED BY CARL H. BIGGS CO., LOS ANGELES, CALIF., OR EQUAL.
 - HUMIDITY: UNIT SHALL BE CAPABLE OF OPERATION AFTER EXPOSURE TO 5 HUMIDITY CYCLES CONDUCTED IN ACCORDANCE WITH THE LATEST VERSION OF SIGNAL CORPS DRAWING SC-D-16286. UPON COMPLETION OF THE HUMIDITY CYCLES THE UNIT SHALL BE ALLOWED TO DRY AT 25°C AMBIENT FOR A PERIOD OF 1 HOUR.

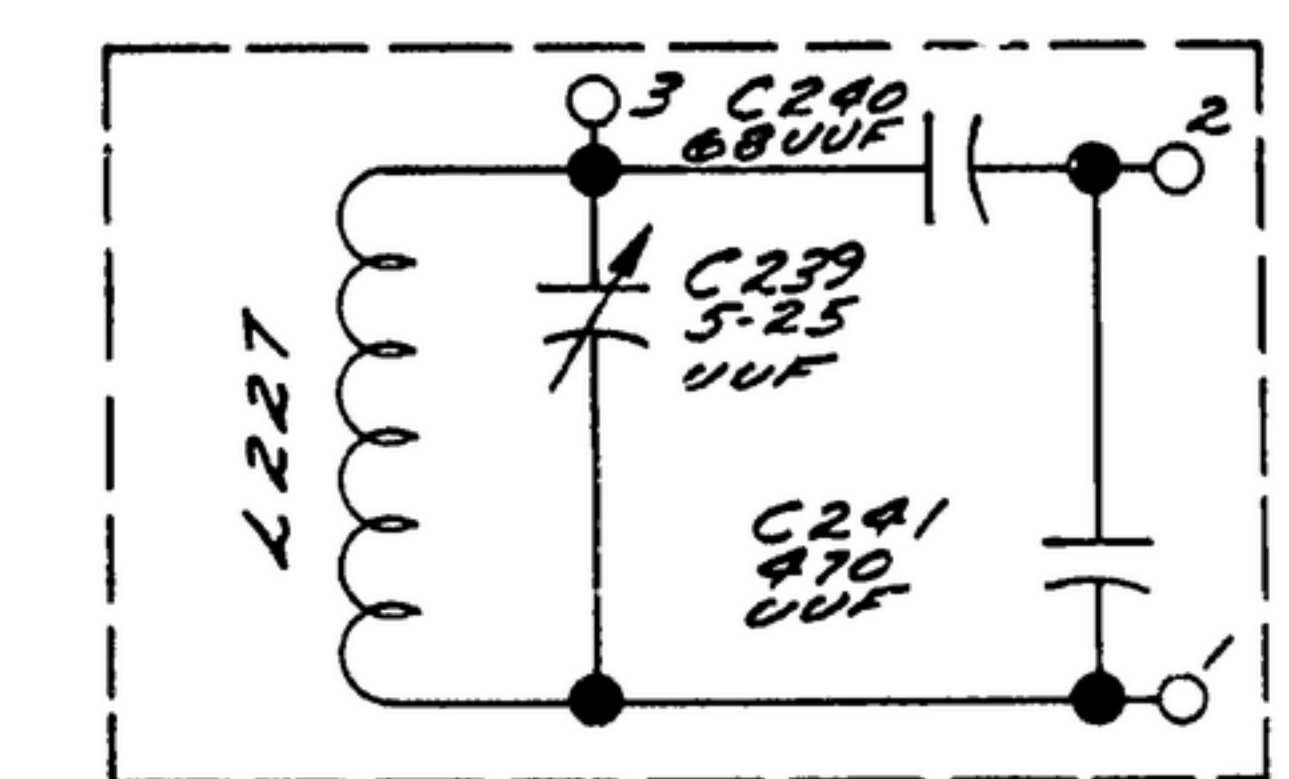
(B) 11. TUNING CORE REFERRED TO IN NOTE 5 SHOULD BE SM-C-249245 AND MUST BE WITHIN ± 1% OF NOMINAL PERMEABILITY.



SECTION A-A



SEE NOTE 2



SCHEMATIC DIAGRAM FOR COIL ASSY

| QTY | PART NO. | DESCRIPTION | MATL. | MATL. SPEC. | NOTES |
|-----|----------------|----------------------|-------|-------------|-------|
| 8 | 105130317-7 | SOLDER, SOFT | | QA-S-571 | 1 |
| 7 | 115130318-7 | BONDING AGENT | | | 9 |
| 6 | CM-150476 | CAPACITOR - FIXED | | MIL-C-5 | |
| 5 | SM-C-28322G-13 | CAPACITOR - FIXED | | | |
| 4 | SM-C-28322G-2 | CAPACITOR - VARIABLE | | | |
| 3 | SM-B-249166 | CAN-MARKED | | | |
| 2 | SM-B-249062 | FRAME ASSY - COIL | | | |
| 1 | SM-B-283290 | COIL ASSY | | | 9 |

| | | | |
|--|------------------------|----------------|---|
| DRAWN NUGEN | CHECKED Ehm | APPROVED | REVISIONS |
| UNLESS OTHERWISE SPECIFIED: DECIMAL DIMENSIONS INCLUDING HOLE SIZES MAY VARY ±.005 FRACTIONAL DIMENSIONS INCLUDING HOLE SIZES MAY VARY ±1/64 MACHINED ANGLES MAY VARY ±.1° DRESSED ANGLES MAY VARY ±.50° BROKEN ANGLES MAY VARY ±1° ECCENTRICITY BETWEEN ANY DIAMETERS ON THE SAME CENTERLINE SHALL NOT EXCEED .010 TOTAL INDICATOR READING. ALL DIMENSIONS ARE FINISH DIMENSIONS INCLUDING APPLIED FITS AND ARE GIVEN IN INCHES. | | 1421A-DH-51-93 | REVIEWED PME APPROVED HLY PME DATE 21 FEB 56 |
| SM-D-343629 | SM-D-248859S-11-248775 | APPLICATION | SCALE 2/1 |

COIL ASSY-R.F.

DEPARTMENT OF THE ARMY
SIGNAL CORPS ENGINEERING
LABORATORIES

FORT MONMOUTH NEW JERSEY

SM-D-249095