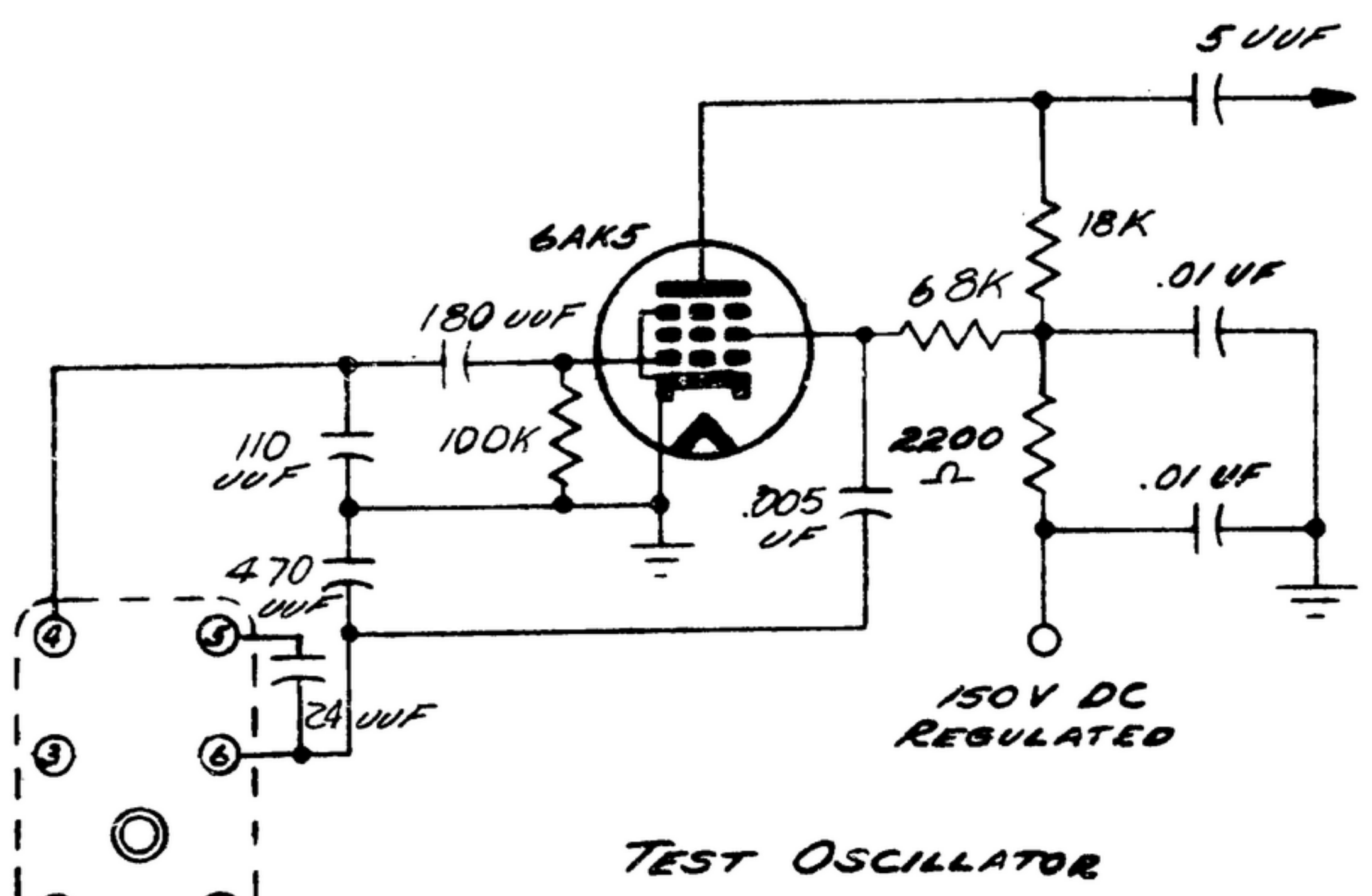
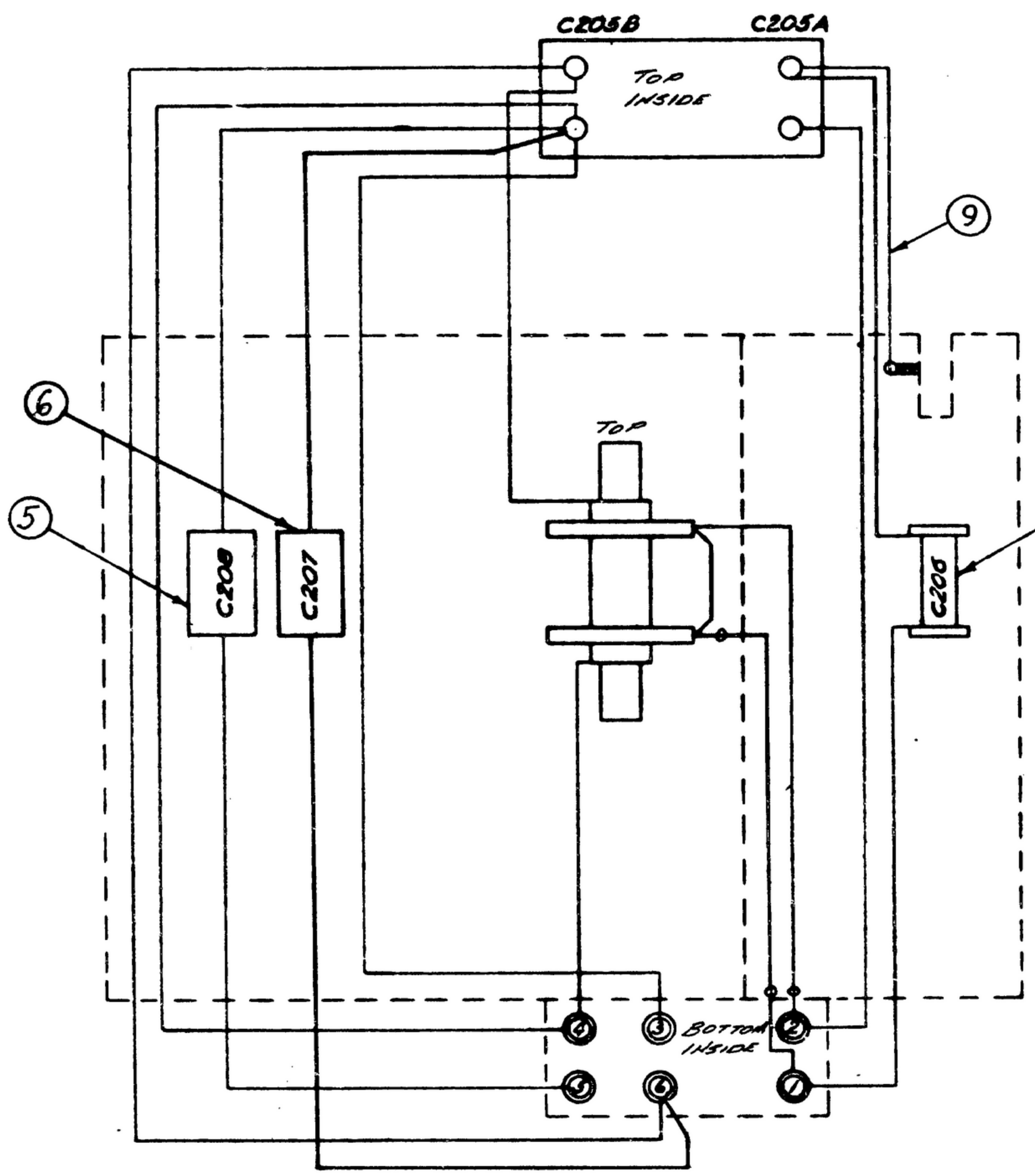
*FOR INFORMATION ONLY. CONTRACTOR MAY AT HIS OPTION DEVIATE FROM THESE PROCESS DETAILS.

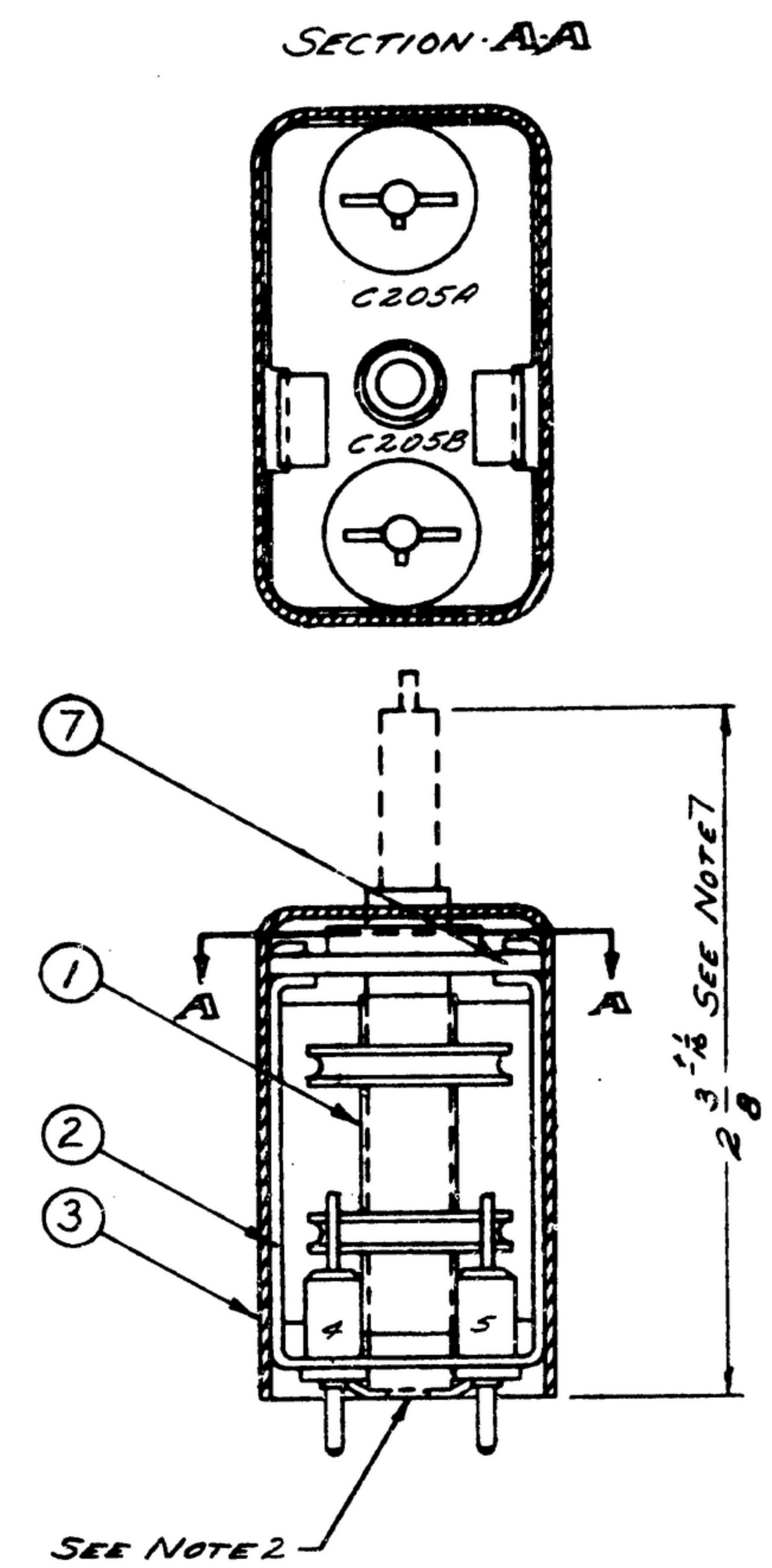
* SWE APPROVAL		REVISIONS			
SYM	PR10042-13	SYM	DESCRIPTION	DATE	APPROVAL
		A_6	A_1-ADDED ITEM 11; A_2-DELETED ITEM 4 & NOTE 4. A_3-CAN-MARKED WAS CAN-ANT. A_4-SWE PART NO. REPLACED COLLINS PART NO. COL. A_5-MIL-C-20 WAS JAN-C-20. A_6-ADDED APPL. SM-D-343629	20 NOV. 59	42428-PC-59-A1-61 REV'D PME
B	CA 84960	B	(1)-ADDED NOTE 13	16 NOV. 60	42428-PC-59 REV'D PME
		C_1	±1% WAS ±.1%	26 MAR 1965	21581-PC-61 REV'D PME

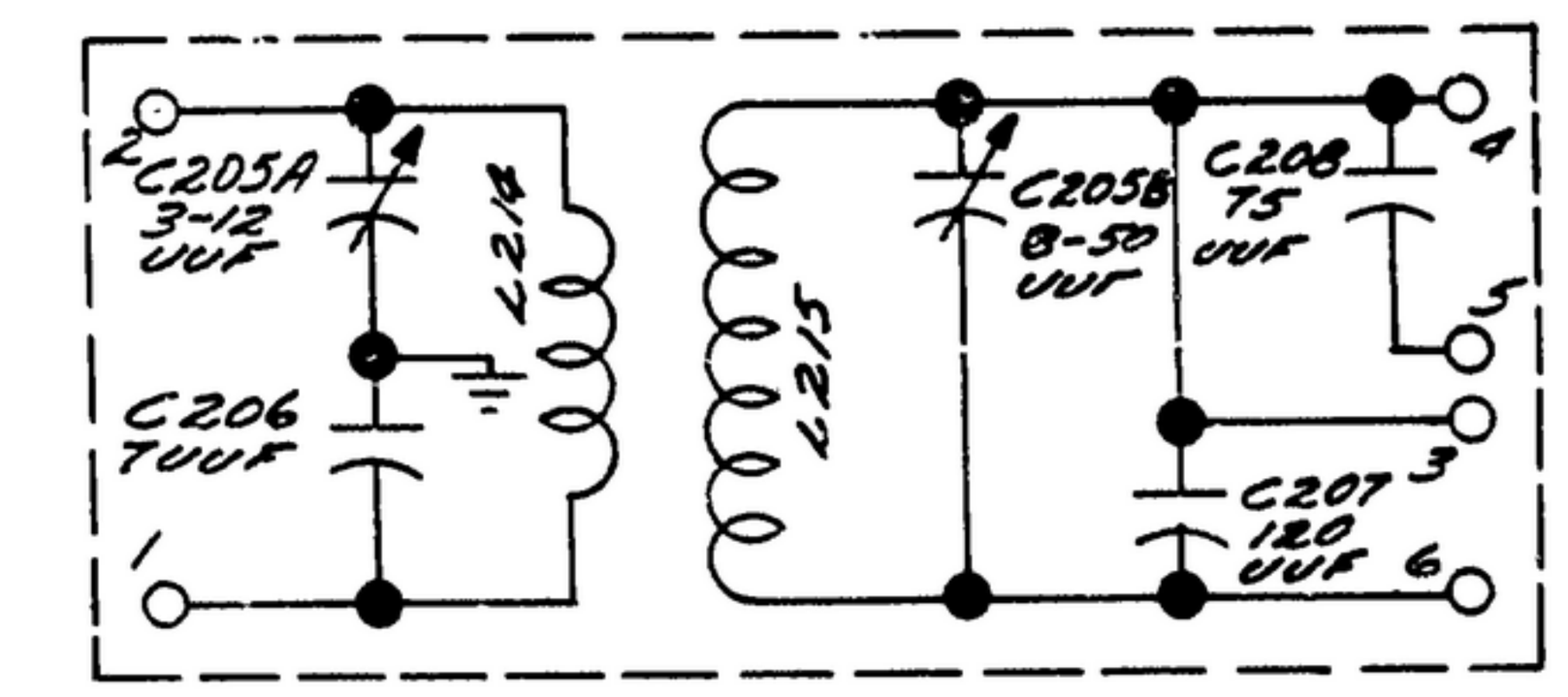


TEST OSCILLATOR



WIRING DIAGRAM





SCHEMATIC DIAGRAM OF COIL ASSY

CORE POSITION INCHES ±.0002	TEST OSC FREQ MC	FREQ TOL KC	EFFECTIVE PARALLEL RESISTANCE (OHMS) ±25%
−0.0300	2.0375	15	
0.0000	2.00	10	20000
‡ 0.0800	1.90	‡	
0.1600	1.80	10	
0.2400	1.70	10	
0.3200	1.60	10	
0.4000	1.50	10	21000
0.4800	1.40	10	
0.5600	1.30	10	
0.6400	1.20	10	
‡ 0.7200	1.10	‡	
0.8000	1.00	10	24000
0.8300	.9625	15	

‡ ALIGNMENT POINTS SEE NOTE 6

NOTES:

1. SOFT SOLDER PER SPEC MIL-S-6872 USING ROSIN CORE SOLDER (11) COMP. SN60.
2. COIL FORM OF COIL ASSY (1) TO BE CONCENTRIC WITH .140 DIA HOLE IN FRAME (2) WITHIN .020 T.I.R.
3. MOUNTING POSITION OF CAPACITOR OPTIONAL, PROVIDING NO CAPACITOR COMES WITHIN 1/16 OF COIL WINDING.

(A_2)

5. TYPE S, NO. 22 DRAWN & ANNEALED, TIN COATED.
6. ALIGNMENT: WITH COIL ASSY IN TEST JIG, AND STANDARD POWDERED TUNING CORE POSITIONED IN THE COIL, ADJUST SECTION "B" OF VARIABLE CAPACITOR (7), UNTIL TEST OSCILLATOR FREQUENCY IS WITHIN 500 CPS OF THE VALUE SHOWN IN TABLE AT THE TWO ALIGNMENT POINTS. THE FINAL SETTING OF THE VARIABLE CAPACITOR (7), SHALL LEAVE A RESERVE ADJUSTMENT OF 4 μμF.
7. BROKEN LINES INDICATE OUTLINE OF STANDARD POWDERED IRON TUNING CORE OF TEST JIG. DIMENSION APPLIES TO THE CORE IN 0.0800 ALIGNMENT POSTION AFTER ELECTRICAL ALIGNMENT PER NOTE 6.
8. TRACKING: TEST OSCILLATOR FREQUENCY SHALL BE WITHIN THE TOLERANCE OF TABLE AT SPECIFIED CORE INSERTIONS AT 25°C.
9. STABILITY: THE RESONANT FREQUENCY ON THE TUNING COIL SHALL VARY NO MORE THAN 40 PPM/°C FROM THE 25°C VALUE OVER OVER THE SPECIFIED TEMPERATURE RANGE.
10. TEMPERATURE RANGE −40° TO +85°C OPERATING, −62°C TO +85 STORAGE.
11. THE COIL ASSY SHALL BE BONDED TO THE BASE PLATE AND TO THE VARIABLE CAPACITOR BOARD (7) TOP WITH BONDING AGENT (10) * R-313 AS SUPPLIED BY CARL H. BIGGS CO, LOS ANGELES, CALIF, OR EQUAL.
12. 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_1) 13. TUNING CORE REFERRED TO IN NOTE 7 SHOULD BE SM-C-249245, AND MUST BE WITHIN ± 1% OF NOMINAL PERMEABILITY. (C_1)

* SWE. PART NO.	ITEM	REQD	PART NO.	DESCRIPTION	MATL	MATL SPEC	NOTES
10S130317-7	11	AS REQ'D	——	SOLDER, SOFT		QQ-S-571	1
11S130318-7	10	AS REQ'D	——	BONDING AGENT			11
30S110663-39	9	AS REQ'D	SM-D-249087-1	WIRE		MIL-W-3861	5
	8	1	CC20CH070C	CAPACITOR-FIXED		JAN-C-20	
	7	1	SM-C-283229-3	CAPACITOR-VARIABLE			11
	6	1	SM-C-283226-18	CAPACITOR-FIXED			
	5	1	SM-C-283226-14	CAPACITOR-FIXED			
	~~4~~	~~AS REQ'D~~	~~SM-B-249214~~	~~TUBING~~			~~4~~
	3	1	SM-B-249158	CAN-MARKED			
	2	1	SM-B-249067	FRAME ASSY			11
	1	1	SM-B-283280	COIL ASSY			11

LIST OF MATERIAL — ~~COLLINS PART NO.~~ 558 0458 004

		SM-D-343629	↑
~~558 0453 001~~	~~1~~	SM-D-248859	SC-DL-248775
~~COLLINS NO.~~	~~QTY~~	NEXT ASSY	USED ON

APPLICATION

DRAWN: HAMER — CHECKED: [signature] — APPROVED:

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°
SHEARED ANGLES MAY VARY ±.25°
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 FINISH AND ARE GIVEN IN INCHES.

~~COLLINS RADIO CO. CEDAR RAPIDS, IOWA~~ 14214-PH-51-93

SIGNAL CORPS — REVIEWED: PME — APPROVED: HLY PME

DATE 16 FEB 56 — SCALE 2/1

COIL ASSY-ANT

DEPARTMENT OF THE ARMY SIGNAL CORPS ENGINEERING LABORATORIES FORT MONMOUTH NEW JERSEY

SM-D-249087

WHEN REFERRING TO THIS DRAWING STATE DRAWING NO., APPLICABLE ISSUE SYMBOL, IF ANY, AND DATE