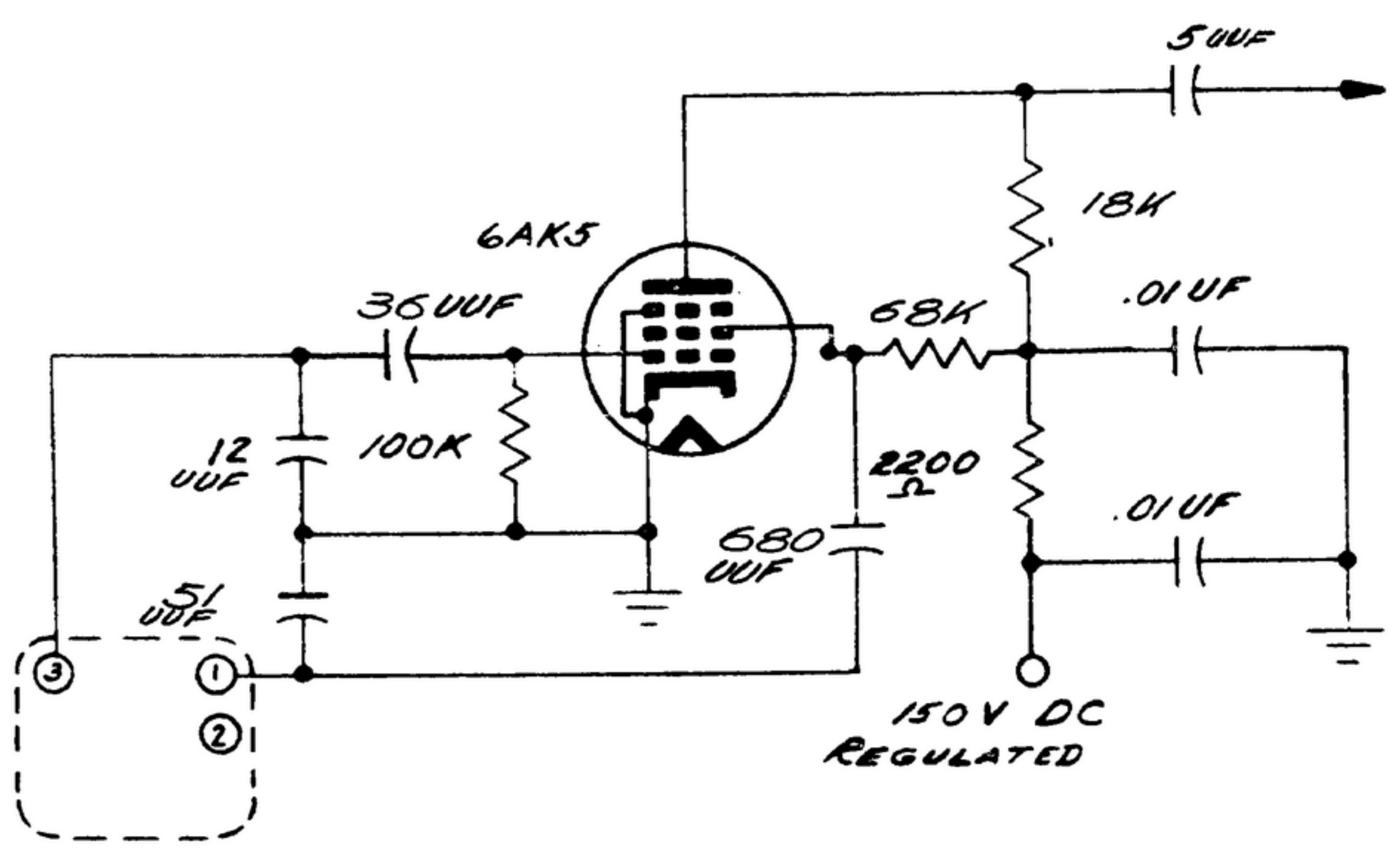
*FOR INFORMATION ONLY. CONTRACTOR MAY AT HIS OPTION DEVIATE FROM THESE PROCESS DETAILS.

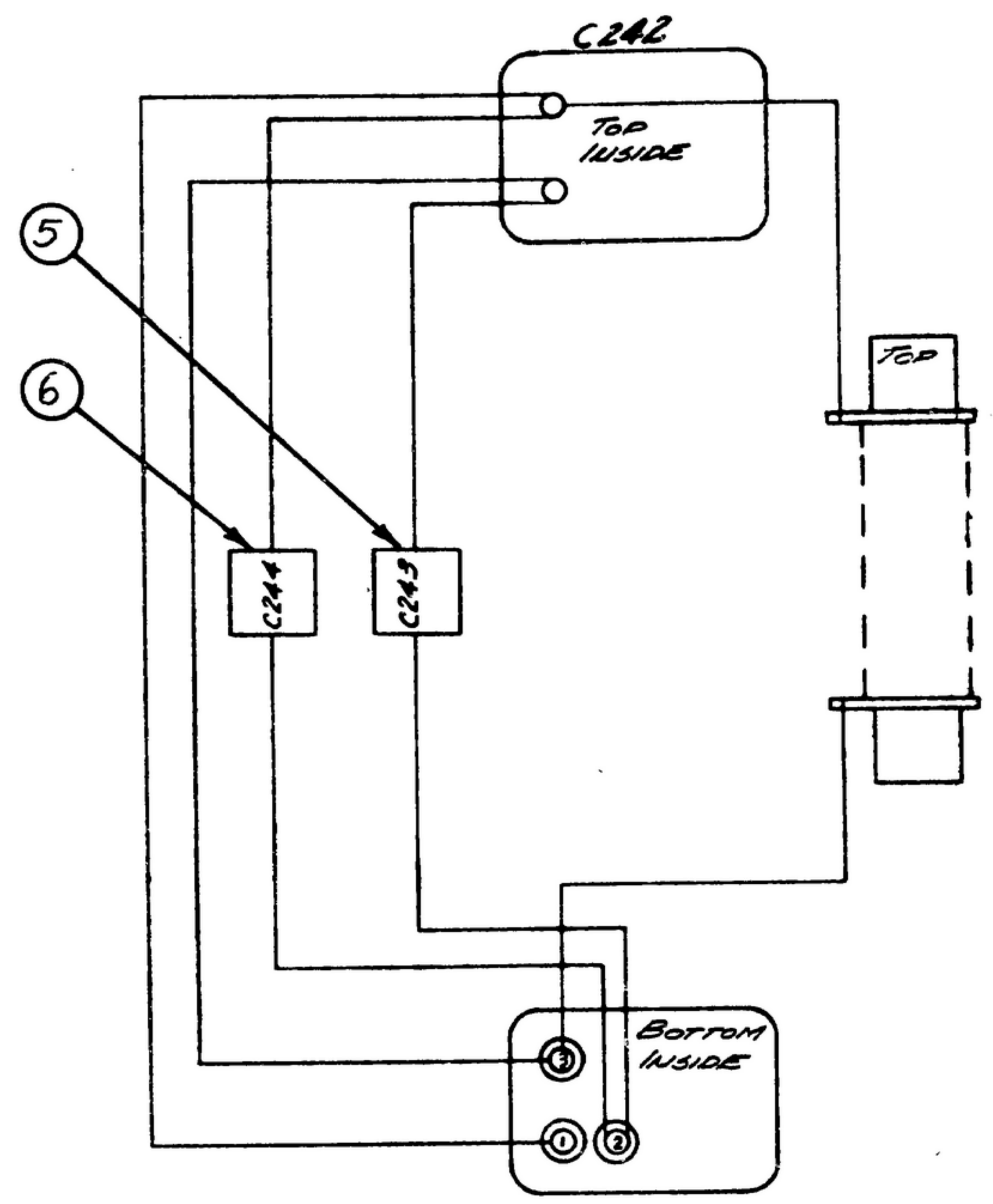
EQUIP. TYPE ~~R390A/URR~~ EXP. NO.

~~COLL. 548 7303 004~~

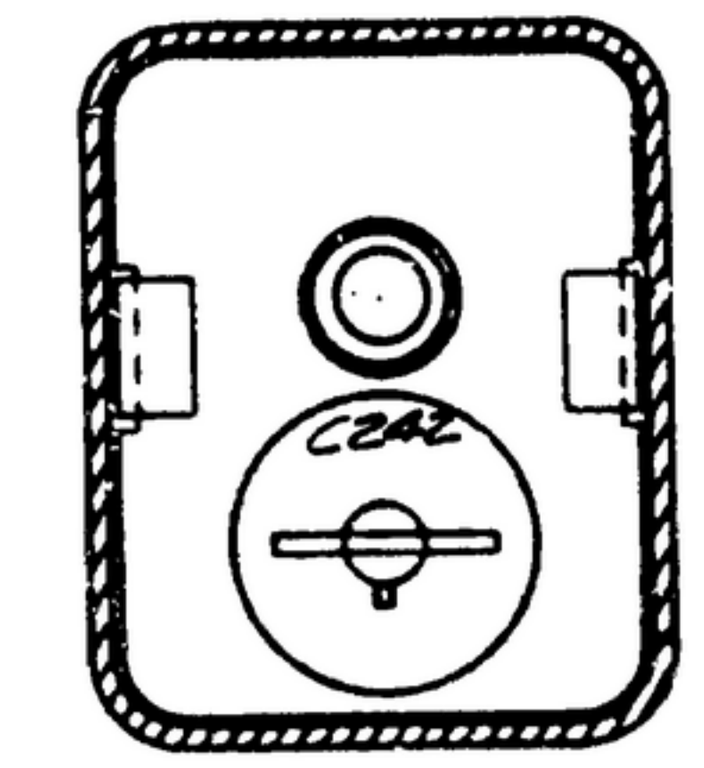
✱ SWE APPROVAL		REVISIONS			
SYM	PR10042/18	SYM	DESCRIPTION	DATE	APPROVAL
		A_3	A_1 - ADDED ITEM 8. A_2 - ITEM 3 DESCRIPTION WAS "CAN - RF". A_3 - ADDED NEW APPL.	20 NOV 59	42428-PC-59-A1-61 REV'D. PME
B	CA84980	B	(1) - ADDED NOTE 11.	16 NOV. 60	42428-PC-59 REV'D. PME
		C_1	(1) FREQ TOL 72 WAS 48; 64 WAS 32	26 MAR 1965	21582-PC-61 REV'D PME



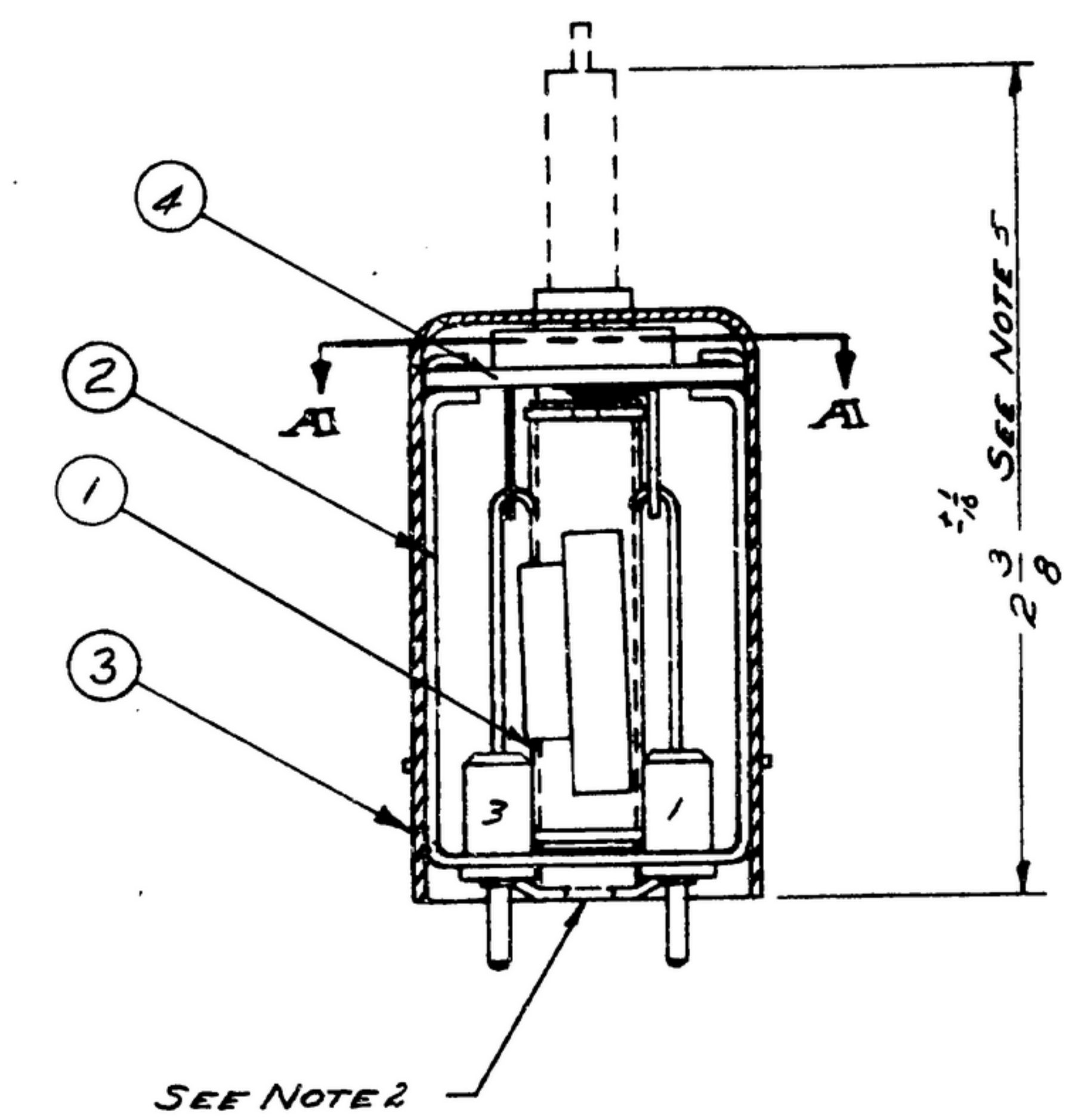
TEST OSCILLATOR

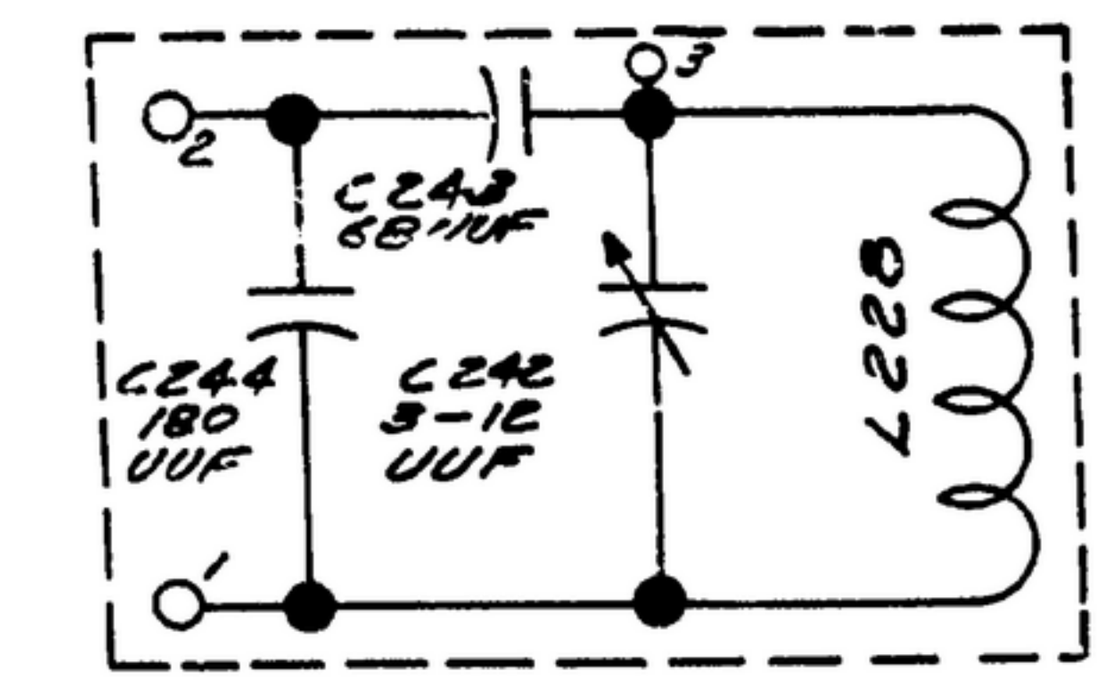


WIRING DIAGRAM



SECTION A-A





SCHEMATIC DIAGRAM FOR COIL ASSY

(C_1)

CORE POSITION INCHES ±.0002	TEST OSC. FREQ MC	FREQ TOL KC	EFFECTIVE PARALLEL RESISTANCE (OHMS) ±25%
-0.0300	16.3	72	16000
0.0000	16.0	64	
≠ 0.0800	15.2	64 ≠	
0.1600	14.4	64	
0.2400	13.6	64	
0.3200	12.8	64	
0.4000	12.0	64	21000
0.4800	11.2	64	
0.5600	10.4	64	
0.6400	9.6	64	
≠ 0.7200	8.8	≠	
0.8000	8.0	64	26000
0.8300	7.7	72	
≠ ALIGNMENT POINTS SEE NOTE 4			

NOTES:

1. SOFT SOLDER PER SPEC MIL-S-6872 USING ROSIN CORE SOLDER (8) 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.
4. ALIGNMENT: WITH COIL ASSY IN TEST JIG, AND STANDARD POWDERED IRON TUNING CORE POSITIONED IN THE COIL, ADJUST VARIABLE CAPACITOR (4), UNTIL TEST OSCILLATOR FREQUENCY IS WITHIN 1000 CPS. OF THE VALUE SHOWN IN TABLE AT TWO ALIGNMENT POINTS. THE FINAL SETTING OF THE VARIABLE CAPACITOR (4) SHALL LEAVE A RESERVE ADJUSTMENT OF 4 μμf.
5. BROKEN LINES INDICATE OUTLINE OF STANDARD POWDERED IRON TUNING CORE OF TEST JIG. DIMENSION APPLIES TO THE CORE IN 0.0800 ALIGNMENT POSITION AFTER ELECTRICAL ALIGNMENT PER NOTE 4.
6. TRACKING: TEST OSCILLATOR FREQUENCY SHALL BE WITHIN THE TOLERANCE OF TABLE AT SPECIFIED CORE INSERTIONS AT 25°C.
7. STABILITY: THE RESONANT FREQUENCY OF THE TUNING COIL SHALL VARY NO MORE THAN 40 PPM/°C FROM THE 25°C VALUE OVER THE SPECIFIED TEMPERATURE RANGE.
8. TEMPERATURE RANGE -40°C TO +85°C OPERATING, -62°C TO +85°C STORAGE.
9. THE COIL ASSY SHALL BE BONDED TO THE BASE PLATE AND TO THE VARIABLE CAPACITOR BOARD (4) TOP WITH BONDING AGENT (7) *R-313 AS SUPPLIED BY CARL H. BIGGS CO., LOS ANGELES, CAL., OR EQUAL.
10. 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.
11. TUNING CORE REFERRED TO IN NOTE 5 SHOULD BE SM-C-249245 AND MUST BE WITHIN ± 1% OF NOMINAL PERMEABILITY.

(B_1)

✱ SWE PART NO.	ITEM	REQD	PART NO.	DESCRIPTION	MATL	MATL SPEC	NOTES
(A_1) 10S130317-7	8	AS REQ'D	———	SOLDER, SOFT		QQ-S-571	1
11S130318-7	7	AS REQ'D	———	BONDING AGENT			9
	6	1	SM-C-283226-21	CAPACITOR-FIXED			
	5	1	SM-C-283226-13	CAPACITOR-FIXED			
	4	1	SM-C-283230-1	CAPACITOR-VARIABLE			9
(A_2)	3	1	SM-B-289167	CAN-MARKED			
	2	1	SM-B-249062	FRAME ASSY-COIL			9
	1	1	SM-B-283286	COIL ASSY			9

LIST OF MATERIAL — ~~COLLINS PART NO. 558 0447 004~~

		SM-D-343629	
(A_3) ~~558 0453 004~~	~~2~~	SM-D-248854	SC-DL-248775
~~COLLINS NO.~~	~~QTY~~	NEXT ASSY	USED ON
APPLICATION			

DRAWN: HAMER | CHECKED: Rh | 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: H.Y PME
DATE: 23 FEB 56
SCALE: 2/1

COIL ASSY - R.F.

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

SM-D-249096

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

PD-794—874-3971-13—A4768—290807