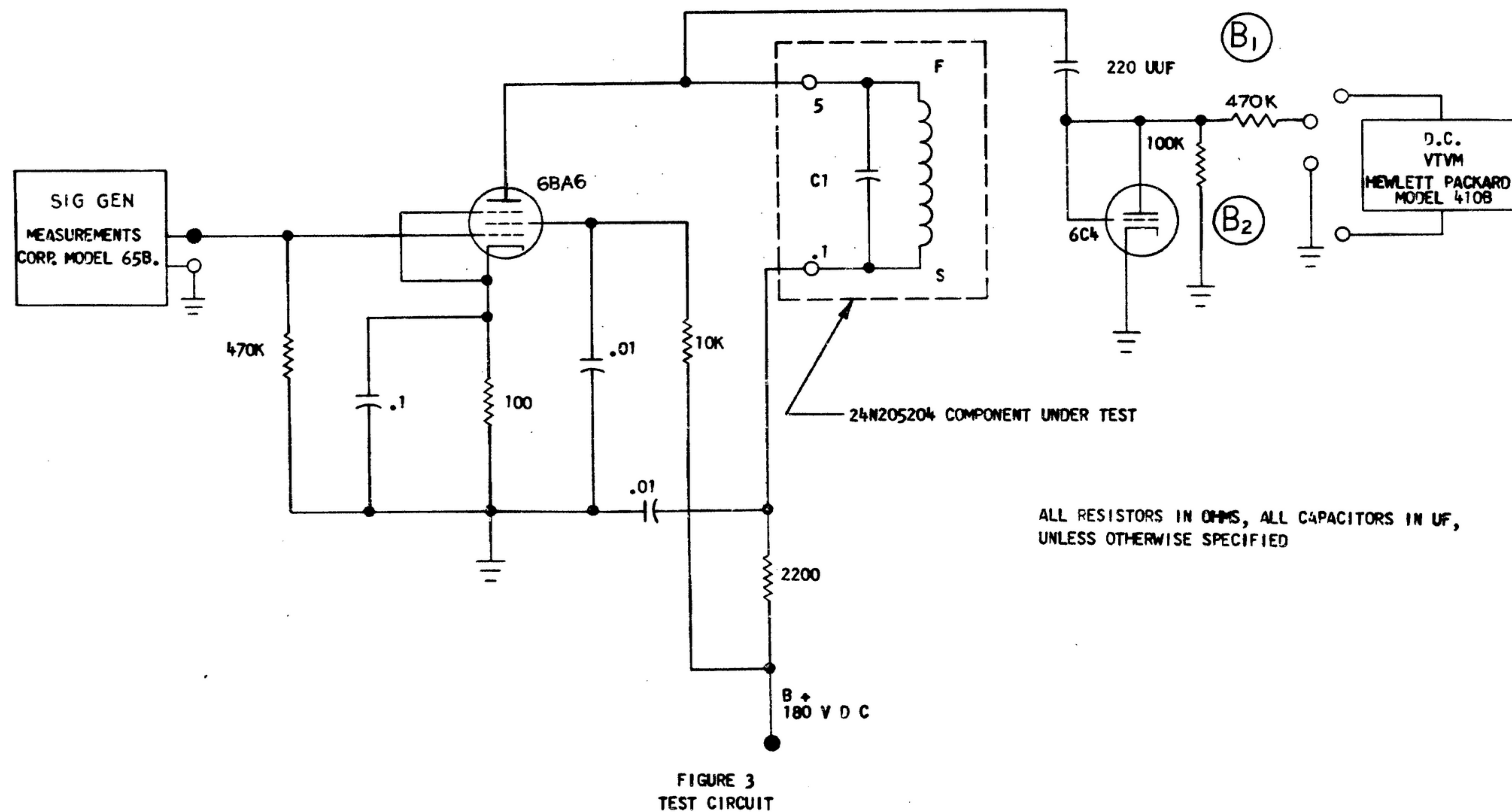
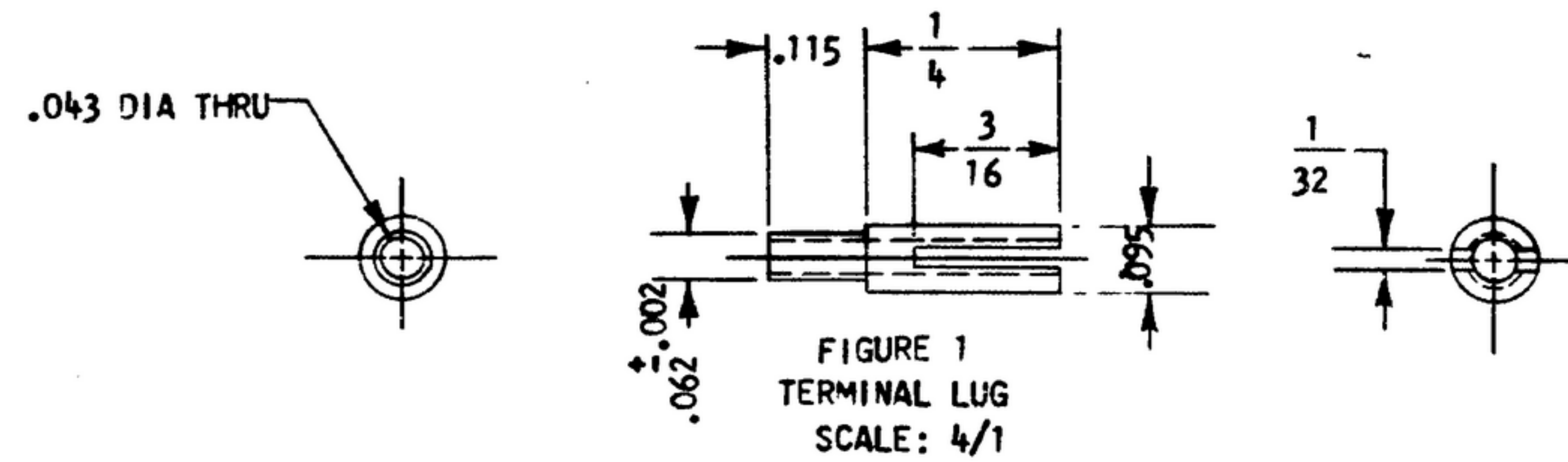
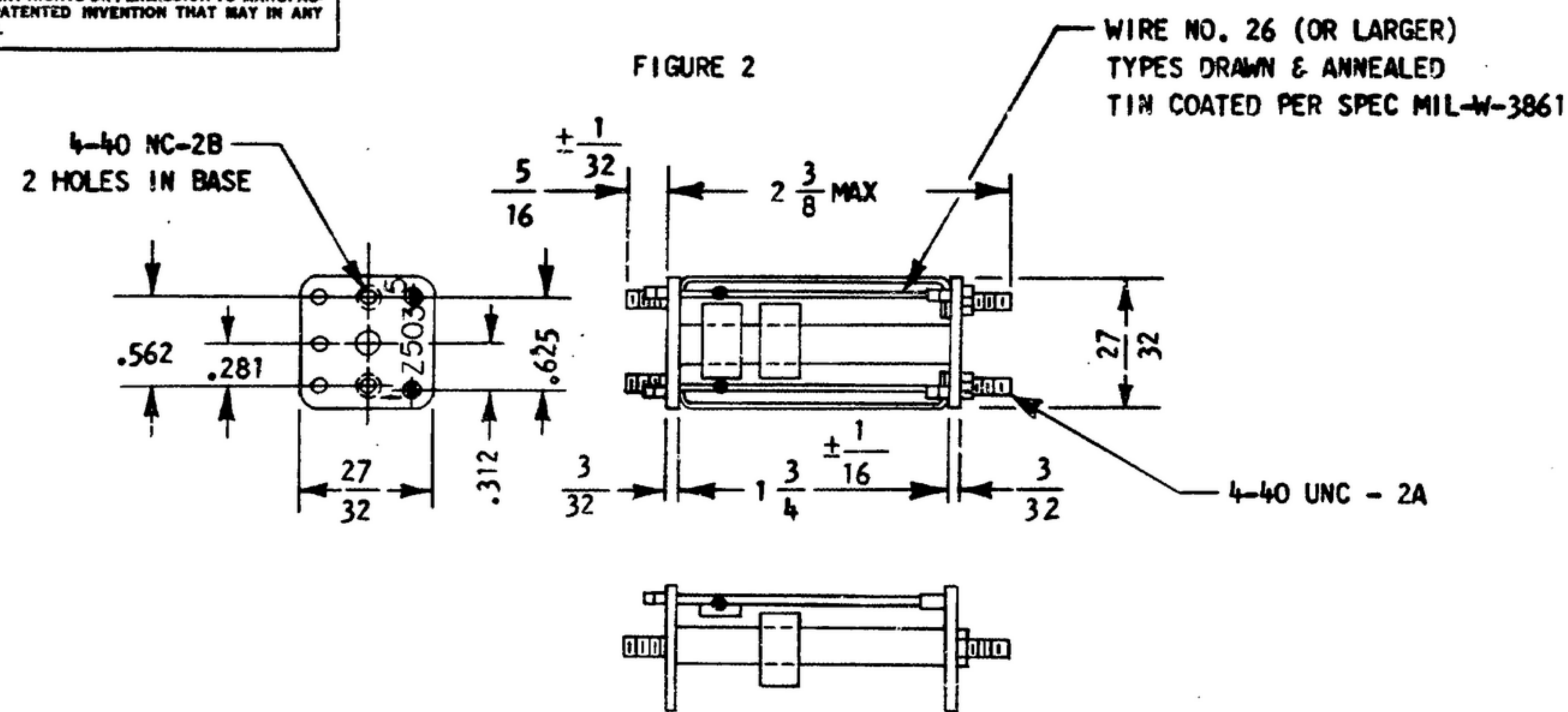


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NOTE: DATA MARKED BY AN ASTERISK (*) ARE FOR INFORMATION ONLY. CONTRACTOR MAY, AT HIS OPTION, DEVIATE FROM THESE DETAILS

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A ₁	- REVISED AND REDRAWN	16 DEC 59	42428-PC-59-A1-51
	RETRACED, NO CHANGE	12 AUG 62	21582-PC-62
B ₂	(1) ADDED 470K RESISTOR (2) REMOVED CAPACITOR	5 MAY 63	21582-PC-61
			REV'D P.M.E.



NOTES:

1. PART MAY BE NO.24N205204 AS SUPPLIED BY STEWART WARNER ELECTRONICS, CHICAGO, ILL. OR EQUAL PROVIDING IT MEETS THE FOLLOWING REQUIREMENTS AND DIMENSIONS SHOWN.

DESCRIPTION: 455 KC TUNED CIRCUIT, AGC AMPLIFIER.

ELECTRICAL CHARACTERISTICS:

CENTER FREQUENCY: 455 K.C.

Q: THE COIL Q SHALL EQUAL 80 MIN. WHEN MEASURED ON BOONTON Q-METER TYPE 160A AS SUPPLIED BY BOONTON RADIO CORP., BOONTON, N.J. OR EQUAL, WITH TERMINAL 1 AND SHIELD CAN GROUNDED.

PRODUCTION MEASUREMENT OF Q: TO TEST CONFORMANCE WITH Q, UNITS SHALL BE TESTED IN THE CIRCUIT OF FIG. 3 AND COMPARED TO A STANDARD COIL ASSEMBLY TO BE APPROVED BY THE CONTRACTOR. D.C. OUTPUT OF JIG WITH COIL UNDER TEST INSERTED SHALL BE 90% MINIMUM OF THE OUTPUT OF THE JIG WITH STANDARD COIL INSERTED WITH INPUT HELD CONSTANT.

MATERIALS AND COMPONENTS:

SHIELD CAN: 29/32" X 29/32" OUTSIDE .018" THICK, 2.044 ± .015 INSIDE DEPTH. ALUMINUM FINISH E513 PER SPEC MIL-F-14072.

PHENOLIC:

TUBING: TORCRITE AS SUPPLIED BY CLEVELAND CONTAINER CO., CLEVELAND, OHIO OR EQUAL; .284 IN. ±.003 IN. O.D., TAPPED FOR 1/4 X 28 SHALLOW THREAD IN ACCORDANCE WITH MPA-11-55T.

SHEET STOCK: PLASTIC TYPE PBE-P PER SPEC MIL-P-3115.

CORE: THREADED CORE PER MPA-11-55T, 1/4 X 28 SHALLOW THREAD X 3/8 LONG.

CUPS: NO. P-3009 AS SUPPLIED BY PYROFERRIC CO., N.Y., N.Y. OR EQUAL, 23/32" O.D. X 27/64" INSIDE DEPTH.

ALL POWDERED IRON PARTS SHALL BE IMPREGNATED TO WITHSTAND THE SERVICE CONDITIONS TEST LISTED BELOW.

TERMINALS—DETAILED BRASS, FINISH M351 PER SPEC MIL-F-14072 AS SUPPLIED BY LERCO ELECTRONICS INC., BURBANK, CALIF.

WIRE: 5 X 44 SNP LITZ WIRE, AS SUPPLIED BY CHICAGO WIRE INSULATING & MFG. CO., CHICAGO, ILL. OR EQUAL.

CAPACITORS: COIL TUNING CAPACITOR CC31SH820G SHALL BE IN ACCORDANCE WITH SPEC MIL-C-20 EXCEPT WHERE AMENDED: CERAMIC STYLE CC31, AMENDED AS FOLLOWS: TOTAL CAPACITANCE 62 MF ± 2%, TEMPERATURE COEFFICIENT -330 PPM/°C, TEMPERATURE COEFFICIENT TOLERANCE H AS SUPPLIED BY ERIE RESISTOR CORP., ERIE, PENNA. OR EQUAL.

IMPREGNATION: COILS SHALL BE IMPREGNATED WITH POLYSTYRENE LACQUER, TYPE POLYWELD NO.912 AS SUPPLIED BY AMPHENOL ELECTRONICS CORP., CHICAGO, ILL. OR CONTRACTORS APPROVED EQUIVALENT.

MANUFACTURERS RECOMMENDED INSTRUCTIONS FOR IMPREGNATING COIL:

- DRY OUT COIL AT 100° C FOR MINIMUM OF 2 HOURS.
- THIN POLYWELD TO BRUSHING CONSISTENCY AND APPLY ONTO COIL THOROUGHLY.
- AIR DRY FOR 30 MINUTES OR BAKE DRY AT 50° C FOR 15 MINUTES.
- REPEAT STEP B & C.

POTTING: COILS SHALL BE POTTED WITHIN THE CUP CORE USING AN EPOXY RESIN TYPE RESIWELD NO. 2 AS SUPPLIED BY H.B. FULLER CO., ST. PAUL, MINN. AND CEMENT TYPE A.M.S. NO CN 881 AS SUPPLIED BY MASS & WALDSTEIN CO., HAVERHILL, MASS. OR CONTRACTORS APPROVED EQUIVALENT.

MANUFACTURERS RECOMMENDED INSTRUCTIONS FOR POTTING COIL:

- CEMENT BOTTOM SIDE OF COIL TO CUP CORE AS SHOWN, ASSURING SEAL BETWEEN THE COIL FORM AND THE CLEARANCE HOLE OF CUP CORE. ALLOW CEMENT TO DRY FOR MINIMUM OF 30 MINUTES.
- HEAT POTTING COMPOUND TO POURING CONSISTENCY AND MIX (EQUAL MEASURES OF HARDENER & ADHESIVE) THOROUGHLY, THEN POUR MIXTURE INTO CUP CORE FILLING THE CUP FULLY.
- BAKE ASSEMBLY AT 100° C FOR MINIMUM OF ONE HOUR.

FUNGICIDAL MATERIALS: ALL ORGANIC MATERIALS SHALL BE FUNGUS INERT OR TREATED TO BE FUNGUS RESISTANT WITH VARNISH, TYPE 1 PER SPEC MIL-V-173.

MARKINGS: WINDINGS SHALL BE CONNECTED TO BASE TERMINALS AS INDICATED. CONTRACTOR'S PART NUMBER SHALL BE AFFIXED ON THE CASE IN A THOROUGHLY LEGIBLE MANNER, ALL CHARACTERS & MARKINGS IN VERTICAL GOTHIC 3/32 INCHES HIGH IN ACCORDANCE WITH AND TO MEET THE TEST REQUIREMENTS OF SPEC MIL-M-13231. THE SYMBOL Z503 SHALL APPEAR ON THE TOP OF THE SHIELD CAN.

SERVICE CONDITIONS:

TEMPERATURE RANGE: -40° C TO +95° C, STORAGE TO -62° C.

HUMIDITY: UP TO 95% R.H.

STABILITY: THE RESONANT FREQUENCY OF THE TUNED CIRCUIT SHALL NOT VARY MORE THAN 8 KC OVER THE TEMPERATURE RANGE -40° C TO +95° C.

SERVICE CONDITIONS TEST: UNITS SHALL OPERATE WITHIN REQUIRED SPECIFICATION OVER ANY NORMAL COMBINATION OF SPECIFIED SERVICE CONDITIONS. UNITS SHALL SHOW NO EVIDENCE OF CORROSION OR MALFUNCTIONING AFTER SUBJECTED TO FIVE CYCLES NON-OPERATING OR HUMIDITY CYCLING SPECIFIED ON DWG. SC-D-16286 PLUS A 4 HOUR DRYING PERIOD.

VIBRATION: THE UNIT SHALL BE SUBJECTED TO A VIBRATION TEST IN ACCORDANCE WITH MIL-STD-202, METHOD 201, 30 MINUTES IN EACH PLANE. AT THE CONCLUSION OF THE TEST UNIT SHALL SHOW NO EVIDENCE OF BREAKAGE, PERMANENT DEFORMATION OR LOOSENING OF PARTS.

CORE TORQUE: CORE SHALL BE ADJUSTED USING A TUNING TOOL NO. 8606 AS SUPPLIED BY GENERAL CEMENT CO., ROCKFORD, ILL. OR EQUAL. RUNNING TORQUE SHALL BE 3/4 TO 6 INCH OUNCES FOLLOWING PRELIMINARY CONDITIONING AS FOLLOWS: ROTATE CORE 1/2 REVOLUTION IN EACH DIRECTION FROM CENTER FREQUENCY POSITION. RETURN TO CENTER FREQUENCY AND A REPEAT FOR A TOTAL OF 5 CYCLES.

AC790	PART NO.	DESCRIPTION	MATL.	MATL. SPEC.
LIST OF MATERIAL				

UNLESS OTHERWISE SPECIFIED				DIMENSIONS ARE IN INCHES		TOLERANCES ON FRACTIONS		TOLERANCES ON DECIMALS		TOLERANCES ON ANGLES	
				±1/64		±.005		±.0			
SM-D-143620	SCDL 248775	DRAWN BY	DATE	REVIEWED	DATE	DEPARTMENT OF THE ARMY U. S. ARMY SIGNAL MATERIEL SUPPORT AGENCY FORT MONMOUTH NEW JERSEY SM-D-249237 CODE 80063					
SM-D-248818	SCDL 248775	CHECKED BY	DATE	APPROVED	DATE	I. F. COIL ASSY					
NEXT ASSY	USED ON	APPROVED BY	DATE	SCALE	WHEN REFERRING TO THIS DRAWING STATE DRAWING NO., APPLICABLE ISSUE SYMBOL, IF ANY, AND DATE.						