

OFFICIAL DRAWING... THIS DRAWING HAS BEEN FORWARDED BY THE GOVERNMENT AND MAY BE REPRODUCED AND USED IN CONNECTION WITH ANY GOVERNMENT PROCEDURE AS AN INSTRUMENT OF OPERATION.

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

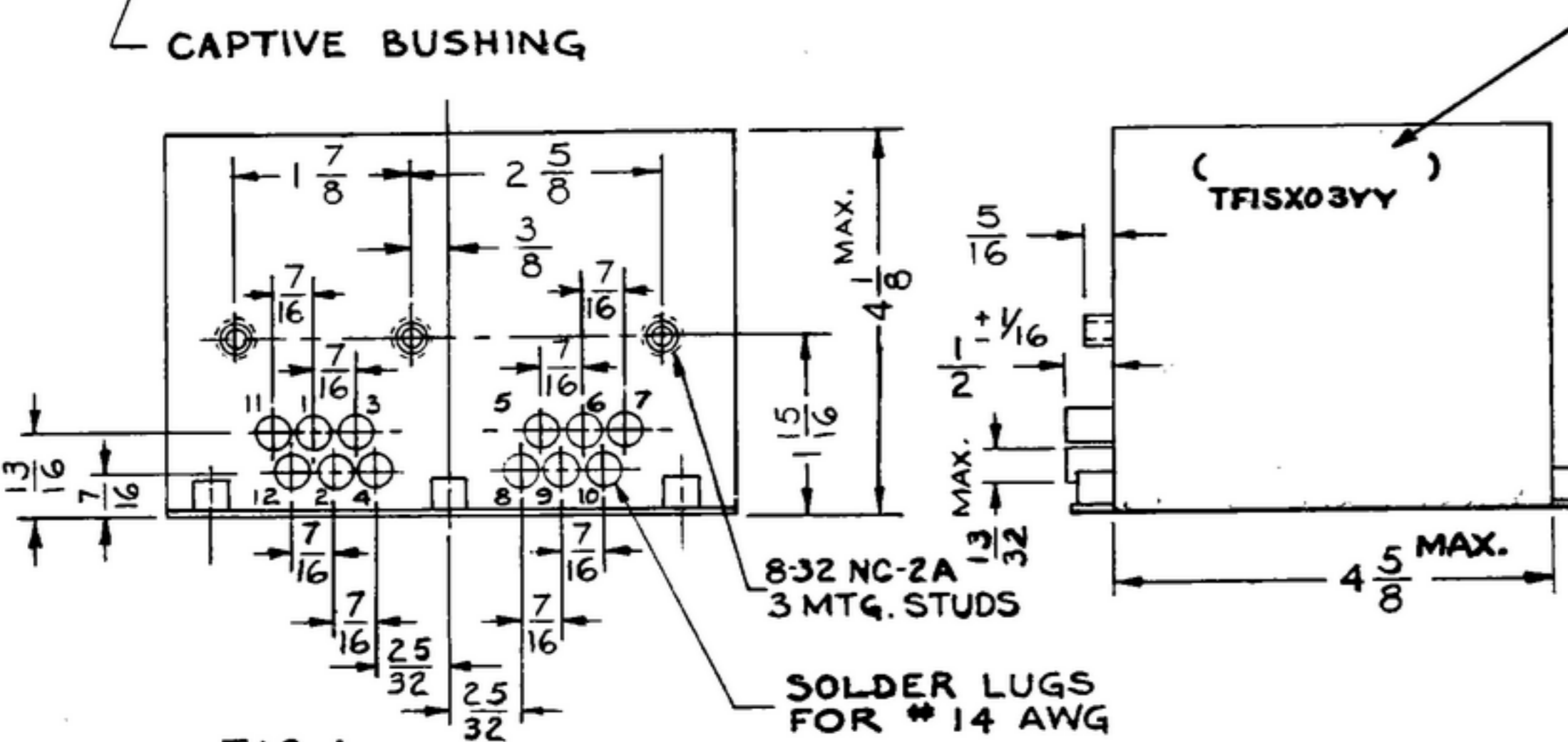
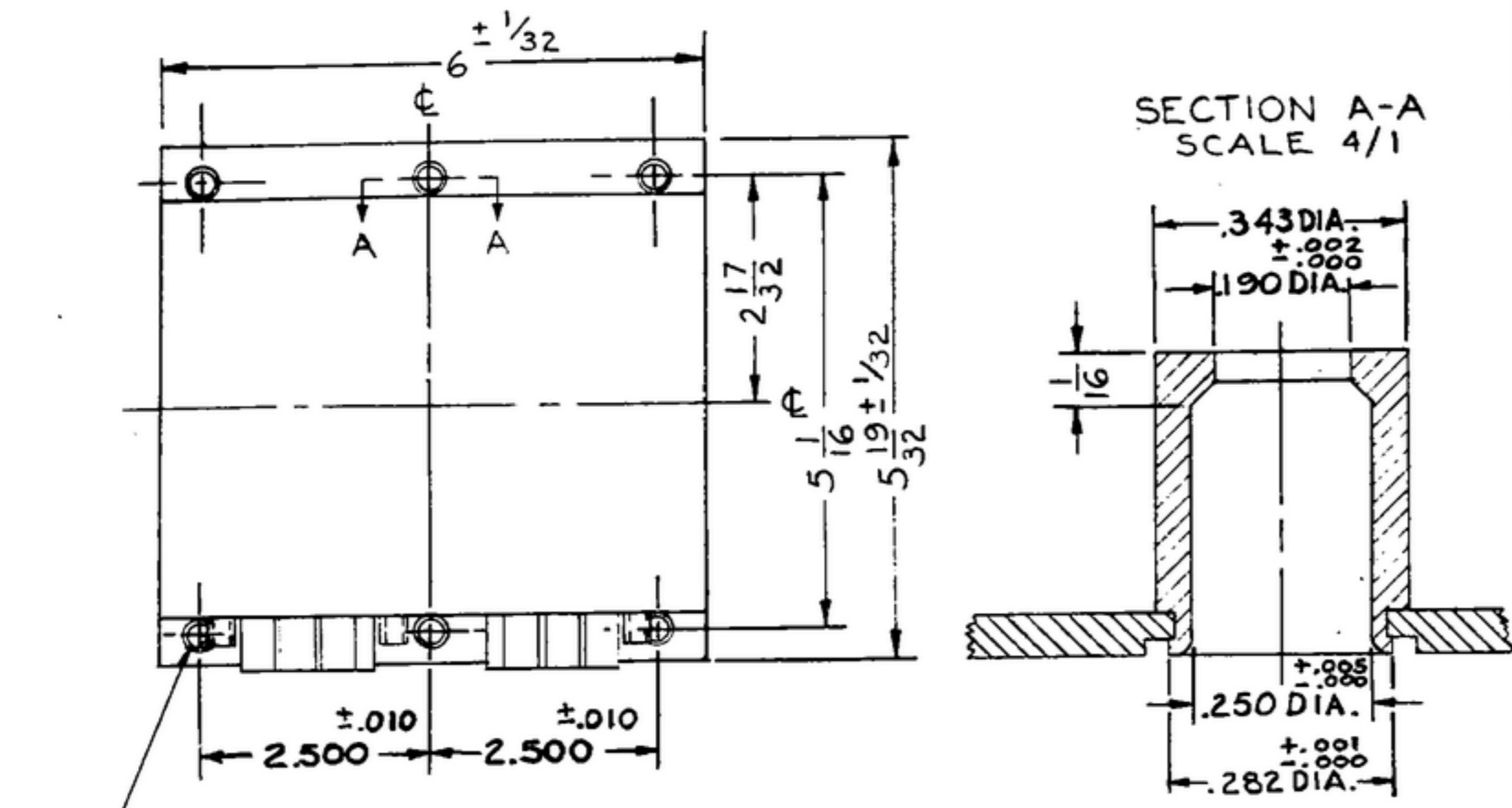
\*SWE APPROVAL  
SYM PR10042 Z

REVISIONS

SYM	DESCRIPTION	DATE	APPROVAL
B	B-1- REDRAWN & REVISED	19 OCT 61	4242B-PC-59 AI-58
A	B-2 NOTES NUMBERED AND REARRANGED, B-3 DELETED LIFE EXPECTANCY NOTE, B-4 REVISED SHIELDING NOTE		REV'D PME
C <sub>1</sub>	(1) NOTE 18, FINISH WAS P213P	21 SEP 65	RH EDD EJP

TABLE 1

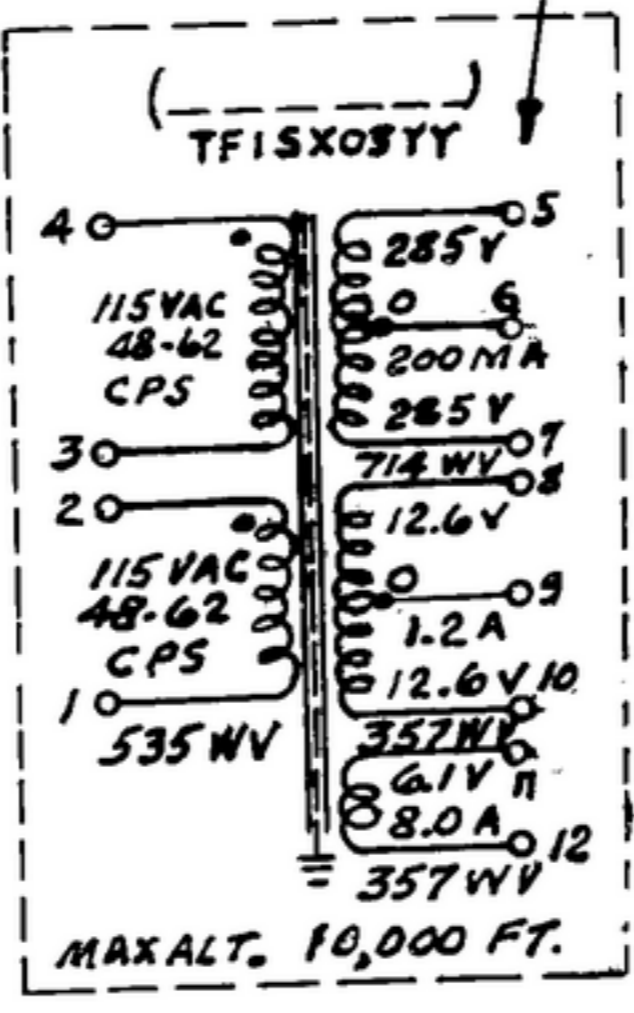
TERM	TERM	NOMINAL VOLTAGE VOLTS	CURRENT RMS AMPERES	TEST VOLTAGE RMS
2,3		CT		
1,3	2,4	115		1500
1	4	230	SEE NOTE 15	
5	7	570 ± 4%	SEE NOTE 15	2000
6		CT		
8	10	25.2 ± 2%	SEE NOTE 15	1000
9		CT		
11	12	6.1 ± 2%	SEE NOTE 15	1000



SEE NOTE 20 AND 19 (ONE OR MORE SIDES AS REQ'D MAY BE USED FOR MARKING)

C<sub>1</sub> NOTES:

- PART MAY BE 20164-2 AS SUPPLIED BY CHICAGO STANDARD TRANSFORMER CO., CHICAGO, ILL. OR EQUAL, PROVIDING IT MEETS THE FOLLOWING REQUIREMENTS AND DIMENSIONS SHOWN.
- DESCRIPTION: POWER TRANSFORMER IN ACCORDANCE WITH SPECIFICATION MIL-T-27, TYPE TFISX03YY.
- APPLICATION: UNIT WILL BE USED IN MILITARY GROUND COMMUNICATIONS EQUIPMENT.
- SPLIT PRIMARY: THE PRIMARIES SHALL BE CONNECTED IN PARALLEL (TERMINALS 1, 3, AND 2, 4 CONNECTED) FOR 115 VOLT OPERATION AND SERIES CONNECTED (TERMINALS 2, 3 CONNECTED) FOR 230 VOLTS INPUT.
- AMBIENT TEMPERATURE RANGE: -40°C TO +85°C.
- TEMPERATURE RISE: THE TEMPERATURE RISE SHALL NOT EXCEED 45°C ABOVE AN OPERATING AMBIENT OF +85°C WHEN OPERATED AT RATED LOAD, MINIMUM SUPPLY FREQUENCY AND SPECIFIED DUTY CYCLE FOR A SUFFICIENT LENGTH OF TIME TO ATTAIN STABILIZED OPERATING TEMPERATURE.
- DUTY CYCLE: CONTINUOUS.
- ALTITUDE: SEA LEVEL TO 10,000 FEET OPERATING.
- SHIELDING: ELECTROSTATIC SHIELD BETWEEN PRIMARY AND SECONDARY WINDINGS CONNECTED TO CASE AND CORE.
- CASE: HERMETICALLY SEALED, FLANGE MOUNTED, PROVIDED WITH CAPTIVE BUSHINGS.
- TERMINALS: SOLDER TYPE WITH CERAMIC BUSHINGS. DETAIL DESIGN IS OPTIONAL, BUT TERMINALS SHALL BE APPROVED BY THE PRIME CONTRACTOR BEFORE PROCEEDING WITH PRODUCTION QUANTITIES.
- MOUNTING: STAINLESS STEEL OR EQUIVALENT CORROSION RESISTANT BUSHINGS SHALL BE USED.
- SHOCK TEST: METHOD 11 PER MIL-T-27, 30 G'S.
- OUTPUT VOLTAGE FULL LOAD: WITH 115V 48 CPS ACROSS THE PRIMARY, THE SPECIFIED TERMINAL VOLTAGE OF TABLE 1 SHALL BE MEASURED AT THE PREVAILING ROOM AMBIENT (25°C) AFTER THE UNIT HAS BEEN OPERATED FOR A SUFFICIENT LENGTH OF TIME TO ATTAIN STABILIZED OPERATING TEMPERATURE. WINDING 5-7 SHALL BE OPERATED AT 200 MADC RATED LOAD, WINDING 8-10 AT 1.2A RMS AND WINDING 11-12 AT 8A RMS IN THE TEST CIRCUIT OF FIGURE 1.
- OUTPUT VOLTAGE FULL LOAD: WITH 230V 48 CPS ACROSS THE PRIMARY WINDING, THE PRIMARY WINDING MUST BE CAPABLE OF SUPPLYING AN ADDITIONAL 1A RMS INTERMITTANT LOAD (FROM TERMINALS 1-2) OPERATING AT A MAXIMUM OF 50% OF A THREE MINUTE DUTY CYCLE. THE LOAD WILL BE AN AUTOTUNE MOTOR, WHICH HAS A POWER FACTOR OF .93. SEE TABLE 1, TERMINALS 1-4, WINDING 5-7 LOADED WITH RECTIFIER CIRCUIT, AND 200 MADC INTO FILTER CIRCUIT, VOLTAGE MEASURED AT TRANSFORMER TERMINALS SHALL BE AS SPECIFIED IN TABLE 1. WINDING 8-10 SHALL DELIVER 1.2A RMS CONTINUOUS LOAD AND AN ADDITIONAL 4.6A INTERMITTANT LOAD OPERATING AT A MAXIMUM OF 70% OF A THREE MINUTE DUTY CYCLE. REGULATION ON THIS WINDING SHALL BE 3.5% FROM 1.2A TO 5.8A. WINDING 11-12 SHALL DELIVER 8A RMS CONTINUOUS LOAD AND AN ADDITIONAL 3A INTERMITTANT LOAD OPERATING AT A MAXIMUM OF 50% OF A THREE MINUTE DUTY CYCLE. ALL MEASUREMENTS SHALL BE MADE AFTER THE TRANSFORMER HAS OPERATED FOR A SUFFICIENT LENGTH OF TIME TO ATTAIN STABILIZED OPERATING TEMPERATURE UNDER CONTINUOUS LOAD CONDITIONS.



- SUPPLY FREQUENCY: 48/62 CPS
- SAMPLE APPROVAL: SAMPLE APPROVAL MUST BE OBTAINED FROM THE PRIME CONTRACTOR BEFORE PROCEEDING WITH PRODUCTION QUANTITIES. ALL THE ELECTRICAL AND MECHANICAL REQUIREMENTS SPECIFIED WILL BE CHECKED BEFORE GRANTING SAMPLE APPROVAL. ANY CHANGE OF MATERIALS, FINISH OR COMPONENT PARTS, SUBSEQUENT TO INITIAL APPROVAL, SHALL BE COORDINATED WITH THE CONTRACTOR FOR THE PURPOSE OF EXTENDING APPROVAL OR RETESTING OF NEW UNITS.
- FINISH: FINISH P213E PER SPECIFICATION MIL-F-14072.
- MARKING: AFFIX ALL CHARACTERS AND MARKINGS IN VERTICAL GOTHIC 3/32 INCHES HIGH IN A PERMANENT CONTRASTING COLOR IN ACCORDANCE WITH AND TO MEET THE TEST REQUIREMENTS OF SPECIFICATION MIL-M-13231.
- ENTER THE PRIME MFR NAME, REG. TRADE-MARK OR CODE SYMBOL ON CASE WHERE INDICATED.

REQD	PART NO.	DESCRIPTION	MATL	MATL SPEC
LIST OF MATERIAL				
		COLLIN RADIO CO. 14214-PH-51-93		
		SIGNAL CORPS		
		REVIEWED PME		
		APPROVED HLY PME		
		DATE 6 FEB. 56	SCALE 1/2	

UNLESS OTHERWISE SPECIFIED	
DIMENSIONS ARE IN INCHES	
TOLERANCES ON FRACTIONS DECIMALS ANGLES	
± 1/64 ± .005 —	
Drawn By: R.B.B.	Checked By: R.E.M.
Chief Drafts	Eng Approval
SM-D-248984	SCDL-248775
NEXT ASSY	USED ON
APPLICATION	

TRANSFORMER, POWER

DEPARTMENT OF THE ARMY  
SIGNAL CORPS ENGINEERING  
LABORATORIES  
FORT MONMOUTH NEW JERSEY  
SM-C-248798

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