

NOTICE - WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY FOR ANY OBLIGATION WHATSOEVER, AND THE FACT THAT THE GOVERNMENT MAY HAVE FORWARDED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONFERRING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR CONVERT ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

1006325

REVISIONS						
SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
-		INITIAL RELEASE CLASS A PER TDOR			4-12-65	LR

REQUIREMENTS:

1. GENERAL:

- A. INTERPRET DRAWING IN ACCORDANCE WITH THE STANDARDS PRESCRIBED BY MIL-D-70327.
- B. UNITS SHALL CONFORM TO THE REQUIREMENTS OF MIL-T-27, GRADE 5, CLASS S, EXCEPT AS, AND IN ADDITION TO THE REQUIREMENTS, SPECIFIED HEREIN.
- C. SUPPLIER SHALL CONFORM TO THE QUALITY ASSURANCE PROVISIONS CONTAINED IN ND 1015404, CLASS 2.
- D. UNITS SHALL BE CAPABLE OF MEETING THE QUALIFICATION REQUIREMENTS OF ND 1002047.
- E. PART MARKING: UNITS SHALL BE PERMANENTLY AND LEGIBLY MARKED, IN ACCORDANCE WITH ND 1002019, WITH THE MANUFACTURER'S NAME AND/OR SYMBOL, LOT CODE, SERIAL NUMBER, TERMINAL IDENTIFICATION, AND NASA PART NUMBER (DRAWING NUMBER AND REVISION LETTER).
- F. PREPARATION FOR DELIVERY SHALL BE IN ACCORDANCE WITH ND 1002215, CLASS I, CODE 1.
 - (1) MARKING OF SHIPPING CONTAINERS SHALL CONFORM TO THE MARKING OF UNIT AND INTERMEDIATE PACKAGES AND METHODS OF MARKING AS SPECIFIED IN ND 1002215.

- (4) CONTROL WINDING (LEADS 6 AND 7):
 - (a) VOLTAGE: 100 MVRMS MAXIMUM (STANDARD TEST CONDITIONS)
 - (b) DC RESISTANCE: 400 OHMS MAXIMUM.
- (5) DIELECTRIC WITHSTANDING VOLTAGE: 1275 VRMS ON SECONDARY WINDING (4-5), 500 VRMS ON ALL OTHERS PER MIL-T-27
- (6) CORE LOSS: 0.7 WATTS MAXIMUM (STANDARD TEST CONDITIONS)
- (7) INSULATION RESISTANCE: 10,000 MEGOHMS MINIMUM AT 500 VDC.
- C. VENDOR SUPPLIED DATA: EACH SHIPMENT OF PARTS SHALL BE ACCOMPANIED BY THE FOLLOWING DOCUMENTATION :
 - (1) CERTIFIED TEST DATA FOR BURN-IN REQUIREMENT (NOTE 4).
 - (2) CERTIFICATE OF COMPLIANCE WITH ND 1015404, CLASS 2.
 - (3) CERTIFICATE OF COMPLIANCE WITH LEAD MATERIAL REQUIREMENT.

3. DESIGN:

- A. OPERATING LIFE: UNITS SHALL BE CAPABLE OF CONTINUOUS UNINTERRUPTED OPERATION AS SPECIFIED HEREIN FOR 2000 HOURS.
- B. CONSTRUCTION:
 - (1) CASE: UNIT SHALL BE ENCAPSULATED WITH A MINIMUM POTTING COVERAGE OF 0.031 INCH OVER CORE AND WINDINGS.
 - (2) LEAD MATERIAL: WELDABLE, UNCOATED, ANNEALED NICKEL PER ND 1015400.
 - (3) LEAD STRENGTH: EACH LEAD SHALL BE CAPABLE OF MEETING THE FOLLOWING TESTS - HOWEVER THE SAME LEAD WILL NOT BE TESTED FOR BOTH. NO MECHANICAL DAMAGE TO ENCAPSULANT OR LACK OF ELECTRICAL PERFORMANCE SHALL BE EVIDENCED AFTER TESTING.
 - LEAD PULL: 4 POUND MINIMUM AXIAL PULL APPLIED WITHOUT SHOCK.
 - LEAD FATIGUE (BEND); DISCARD TESTED UNITS: HOLD UNIT IN SUCH A MANNER THAT A 2 POUND WEIGHT CAN BE SUSPENDED FROM THE LEAD UNDER TEST. THE BEND CYCLE (ONE CYCLE REQUIRED) SHALL BE ACCOMPLISHED BY MOVING THE UNIT BODY, WHILE IN A PLANE, THROUGH A 90° ARC IN ONE DIRECTION, THEN BACK 180° IN THE OPPOSITE DIRECTION, AND THEN BACK 90° TO THE ORIGINAL POSITION.
 - (4) INTERNAL WIRE: MAGNET WIRE SHALL BE 0.0025 DIA (NO. 42 AWG) MINIMUM.

- 4. SPECIAL CONDITIONING: ALL UNITS SHALL BE BURNED IN BY SUPPLIER (SEE TEST CIRCUIT - FIG. 1) AND CERTIFIED TEST DATA SUPPLIED WITH EACH SHIPMENT.
 - A. OPERATING CONDITIONS: OPERATE THE UNIT AT 85°C AMBIENT FOR 50 HOURS IN THE BURN-IN TEST CIRCUIT (FIG. 1).
 - B. MEASUREMENTS: INDUCTANCE AND DC RESISTANCE SHALL BE MEASURED (AND RECORDED) BEFORE AND AFTER BURN-IN AT (25°C) ROOM TEMPERATURE.
 - C. REJECTION: ANY UNIT THAT CHANGES MORE THAN 5% BETWEEN INITIAL AND FINAL MEASUREMENT SHALL NOT BE SHIPPED.

2. ACCEPTANCE AND INSPECTION (100% UNLESS OTHERWISE SPECIFIED).

- A. MECHANICAL PROPERTIES:
 - (1) DIMENSIONS: AS DELINEATED HEREIN.
 - (2) MARKING: AS SPECIFIED FOR PART MARKING.
- B. ELECTRICAL CHARACTERISTICS:
 - (1) STANDARD TEST CONDITIONS:
 - INPUT VOLTAGE (ACROSS LEADS 1 & 3): 35 VRMS ± 2%, 800 ± 8 CPS SINE WAVE WITH 1.0% MAXIMUM HARMONIC DISTORTION.
 - NO LOAD ACROSS LEADS 4 & 5 AND NO CONTROL CURRENT THRU LEADS 6 & 7.
 - (2) PRIMARY (LEADS 1 AND 3, CENTERTAPPED AT 2):
 - (a) PARALLEL INDUCTANCE (STANDARD TEST CONDITION): 500 MILLIHENRIES MINIMUM.
 - (b) PARALLEL INDUCTANCE (STANDARD TEST COND. + 5 MADC THRU LEADS 6 & 7): 100 MILLIHENRIES ± 20%.
 - (c) CENTERTAP BALANCE (STANDARD TEST CONDITION): VOLTAGES MEASURED FROM CENTERTAP TO EITHER END SHALL BE SUCH THAT THE SMALLER SHALL BE NO LESS THAN 98% OF THE LARGER.
 - (d) DC RESISTANCE (1-3): 2.4 OHMS MAXIMUM.
 - (3) SECONDARY (LEADS 4 AND 5):
 - (a) VOLTAGE: 275 VRMS ± 5% (STANDARD TEST CONDITIONS)
 - (b) DC RESISTANCE: 200 OHMS MAXIMUM.

PROCURE ONLY FROM APPROVED SOURCES LISTED IN ND 1002034 FOR THIS DRAWING.

POSTER

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
CAPACITOR VALUES ARE IN μ F	
RESISTOR VALUES ARE IN OHMS	
TOLERANCES ON FRACTIONS DECIMALS ANGLES	
± ± ±	
DO NOT SCALE THIS DRAWING	
MATERIAL	
SEE NOTE	
NEXT ASSY	USED ON
APPLICATION	

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS				
MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.		MANNED SPACECRAFT CENTER HOUSTON, TEXAS		
DRAWN <i>J.P. Leonard</i> 17 FEB 65		SATURABLE REACTOR		
CHECKED <i>J. L. Kennedy</i> 16 FEB 65		SPECIFICATION CONTROL DRAWING		
APPROVED <i>Edgar Chalk</i> 19 FEB 65		DRAWING NO. 1006325		
APPROVED MIT <i>W. J. Ruffa</i> 19 FEB 65		CODE IDENT NO.	SIZE C	SHEET 1 OF 2
APPROVED MSC <i>W. J. Ruffa</i> 4-13-65		DATE	SCALE NONE	

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SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
-		INITIAL RELEASE CLASS A PER TDRR			4-15-65	CR

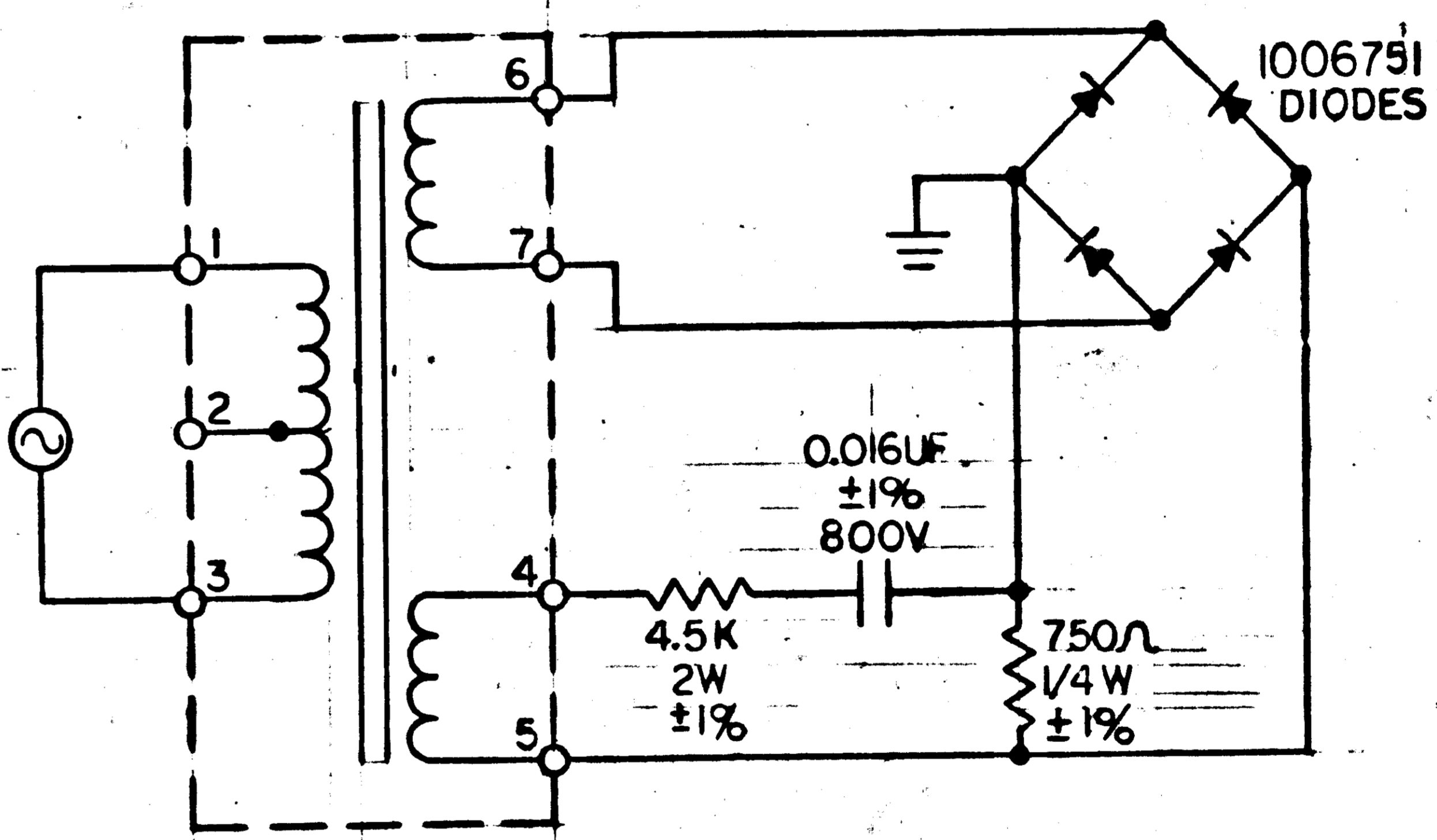
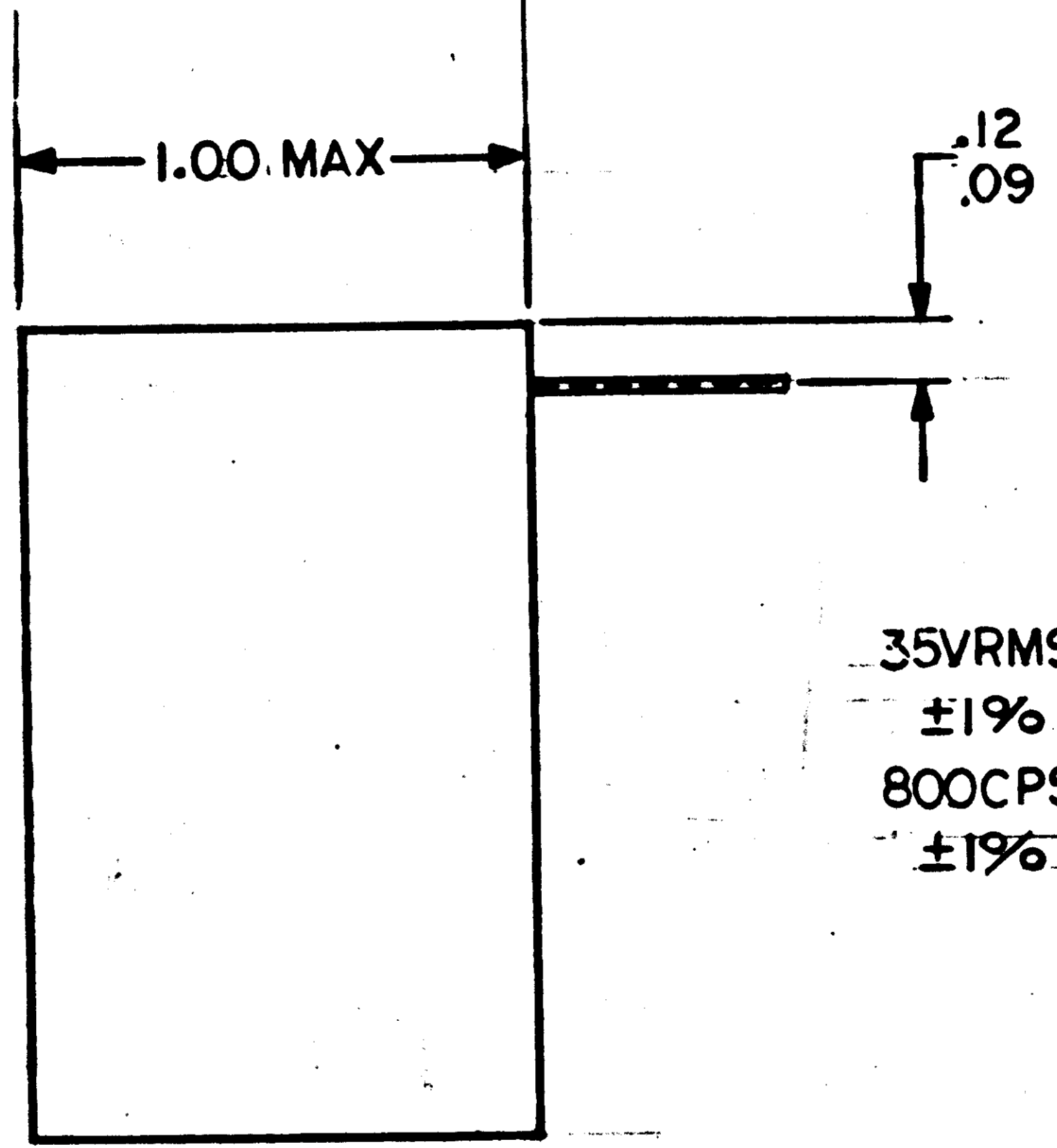
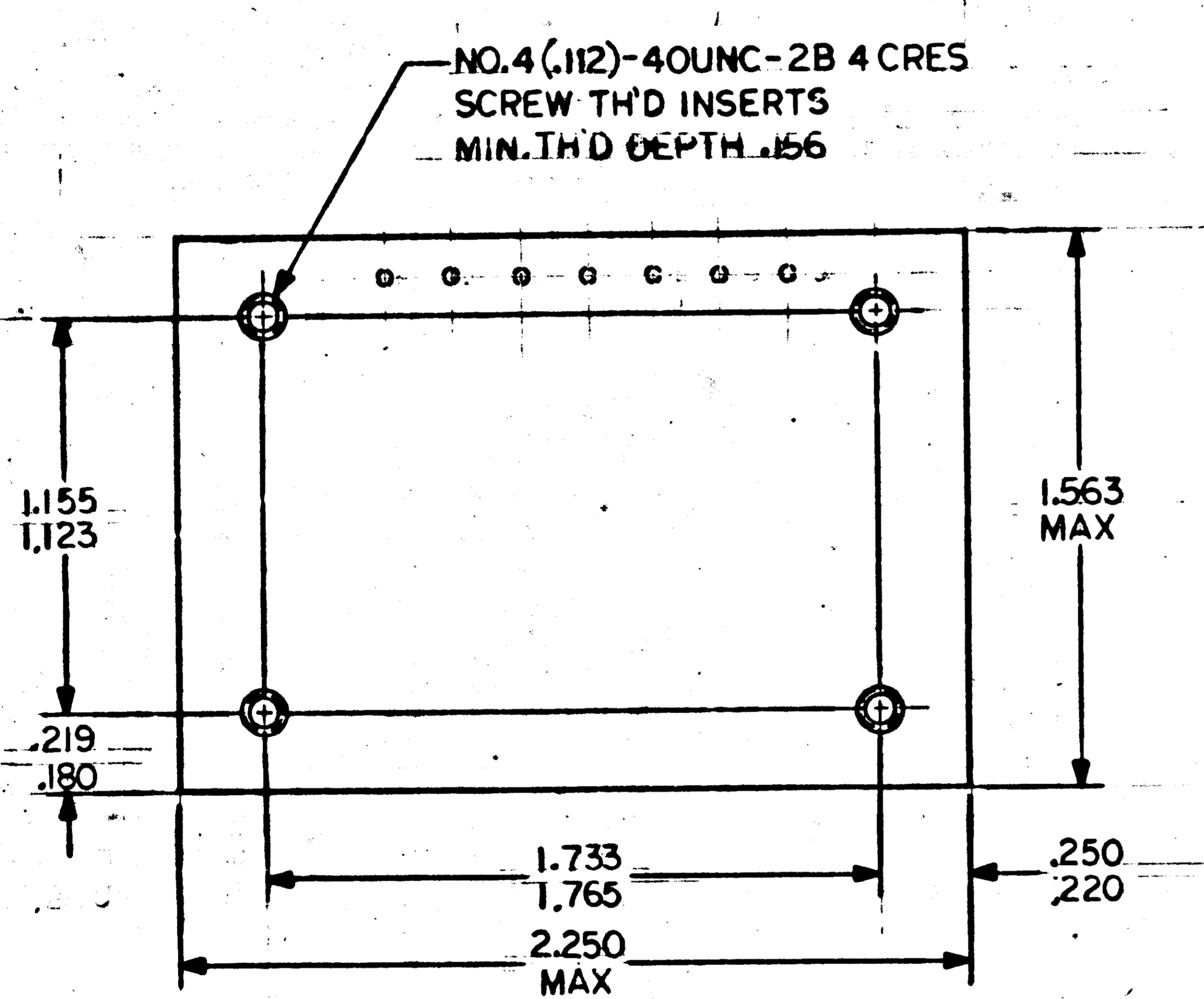
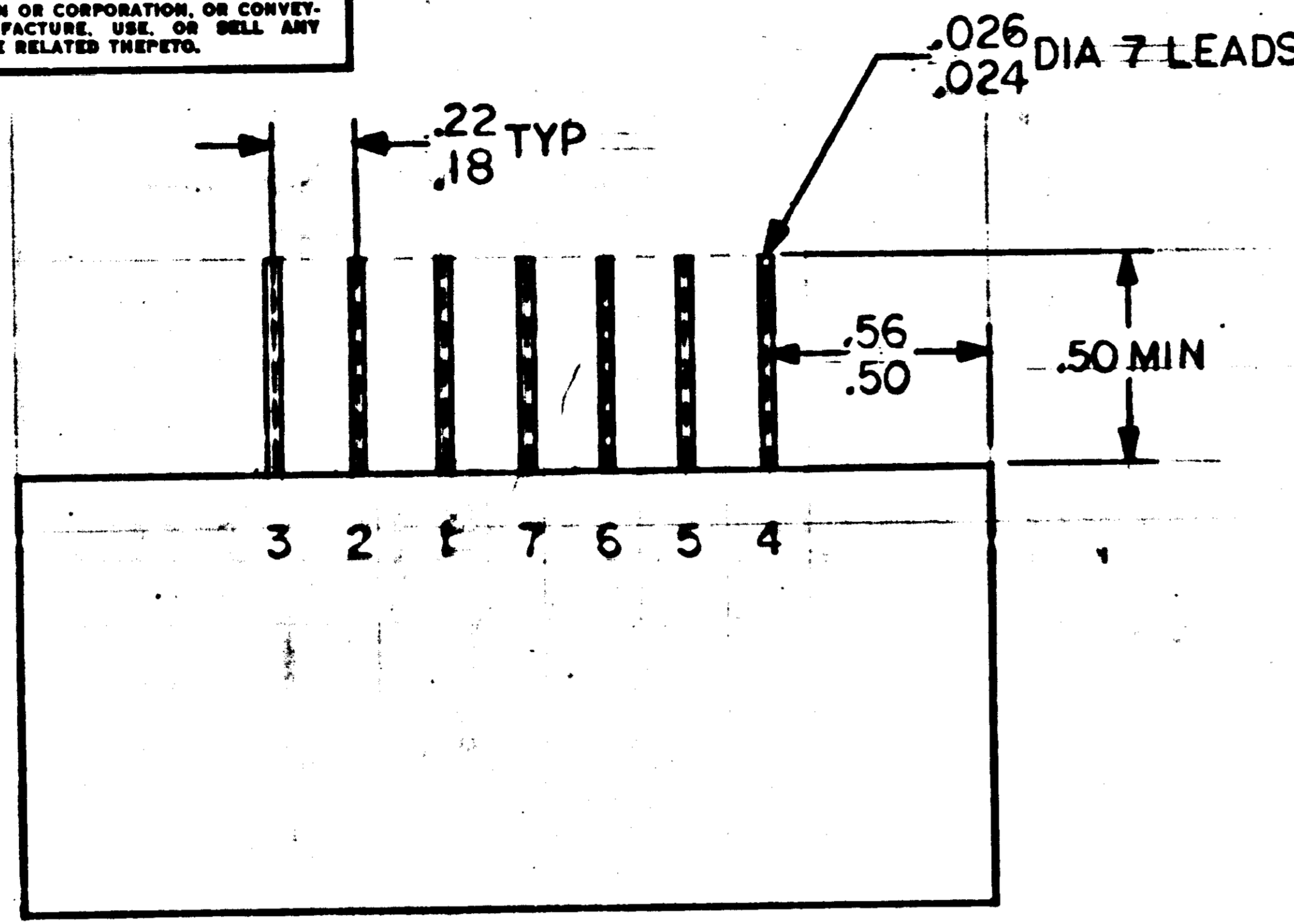


FIG. 1 - BURN IN CIRCUIT

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES CAPACITOR VALUES ARE IN μf RESISTOR VALUES ARE IN OHMS TOLERANCES ON FRACTIONS DECIMALS ANGLES \pm \pm \pm DO NOT SCALE THIS DRAWING MATERIAL

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APPROVED <i>W.H. Kennedy</i>				
APPROVED <i>W.H. Kennedy</i>		DRAWING NO. 1006325		
APPROVED <i>W.J. Rhine</i>		CODE IDENT NO. SIZE C		
APPROVED <i>W.J. Rhine</i>		SCALE NONE SHEET 2 OF 2		

MIT