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REQUIREMENTS:

1. GENERAL:

- INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
- THESE CAPACITORS SHALL CONFORM TO THE REQUIREMENTS OF MIL-C-26655/1B FOR STYLE CS15 CHARACTERISTIC B, WITH THE EXCEPTIONS AND ADDITIONS SPECIFIED IN THIS DRAWING.
- SUPPLIER SHALL CONFORM TO THE QUALITY ASSURANCE PROVISIONS IN ND 1015404 CLASS 2.
 - PERIODIC INSPECTIONS MAY BE SATISFIED BY THE SUBMISSION AND ACCEPTANCE OF CERTIFIED TEST DATA FOR PURCHASED PRODUCTION LOTS.
- CAPACITORS SHALL BE PACKAGED IN ACCORDANCE WITH SUPPLIERS NORMAL COMMERCIAL PRACTICE PER LEVEL C AS DEFINED IN MIL-C-26655.

2. INSPECTION AND ACCEPTANCE:

- MECHANICAL DIMENSIONS AND TOLERANCES PER DRAWING.
- LEAD MATERIAL SHALL BE NICKEL IN ACCORDANCE WITH ND PS1015400. CERTIFICATION OF COMPLIANCE SHALL ACCOMPANY EACH SHIPMENT.
 - LEADS SHALL WITHSTAND A 4 POUND PULL MINIMUM WITHOUT IMPAIRMENT OF PERFORMANCE.
 - LEADS SHALL WITHSTAND THE BEND TEST AS SPECIFIED IN MIL-C-26655 EXCEPT THE WEIGHT SHALL BE 2 POUNDS.
- MARKING:
 - EACH CAPACITOR SHALL BE PERMANENTLY AND LEGIBLY MARKED WITH THE MANUFACTURER'S NAME AND/OR SYMBOL, TYPE NUMBER, CAPACITANCE VALUE AND TOLERANCE; VOLTAGE-RATING AND POLARITY. EACH UNIT PACKAGE AND SHIPPING CONTAINER SHALL ALSO INCLUDE THE NASA DRAWING NO. DASH NO. AND REVISION LETTER.
- DOCUMENTATION:
 - ALL PARTS SHALL BE SERIALIZED. ALL TEST DATA AND X-RAY NEGATIVES SHALL BE FORWARDED WITH PARTS. PARTS WHICH HAVE FAILED NEED NOT BE FORWARDED.

E. ELECTRICAL REQUIREMENTS:

- RATED VOLTAGE PER TABLE II.
- CAPACITANCE VALUE PER TABLE II.

3. DESIGN REQUIREMENTS:

- THE CAPACITORS SHALL MEET THE REQUIREMENTS OF MIL-C-26655/1B FOR:
 - DISSIPATION FACTOR.
 - STABILITY AT HIGH AND LOW TEMPERATURES.
 - OPERATING TEMPERATURE RANGE (-55°C TO +85°C AND 125°C OPERATION WITH DERATING PER MIL-C-26655/1B).
 - SURGE VOLTAGE.

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

9 9929001

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
E	REPLACES REV D WITH CHANGES AND UPGRADED TO A RELEASE PER TDRR 01161	6/3/63	WK
F	REVISED PER TDRR 01560	5/26/63	P.K.B
G	REPLACED BY REV H WITH CHANGES PER TDRR 03168	9/17/60	24

4. SPECIAL CONDITIONING BY SUPPLIER:

- EVERY SHIPMENT SHALL BE TESTED ON A 100% BASIS, BY THE METHODS SPECIFIED TO ELIMINATE ALL SUBSTANDARD OR POTENTIALLY SUBSTANDARD UNITS. X-RAY INSPECTION SHALL BE PER MIL-STD-202 METHOD 209, AND SHALL BE ACCOMPLISHED PERPENDICULAR TO THE MAJOR AXIS OF THE CAPACITOR. THIS INSPECTION SHALL ELIMINATE ANY CAPACITORS HAVING LOOSE SOLDER PARTICLES OR HAVING INADEQUATE ANODE ANCHORAGE AND CONNECTION OR POOR ALIGNMENT.

- BURN-IN: TO ELIMINATE ALL DEFECTIVE COMPONENTS.

EACH UNIT SHALL BE CONNECTED IN SERIES WITH A 3 OHM RESISTOR AND A 1 AMP FUSE: UNITS SHALL THEN BE TESTED AT RATED VOLTAGE AT 125°C MINIMUM OF 250 HOURS. ALL UNITS WHICH HAVE A BLOWN FUSE OR WHICH ARE OUTSIDE OF ALLOWABLE TOLERANCE FOR CAPACITANCE, DISSIPATION FACTOR, OR LEAKAGE CURRENT, WHEN TESTED AT 25°C ON COMPLETION OF BURN-IN SHALL BE DISCARDED.

- EQUIVALENT SERIES RESISTANCE AT 25°C: UNITS SPECIFIED IN TABLE I SHALL BE SCREENED FOR MAXIMUM ESR BY PLACING UNITS IN TEST CIRCUIT AND CALCULATING ESR BY THE FORMULA:

$$ESR = \frac{\left[\frac{E_{R1}}{C_1} \right] \left[\frac{E_{R1}^2 + E_{C1}^2 - E_A^2}{2 E_{R1} E_{C1}} \right]}$$

WHERE:

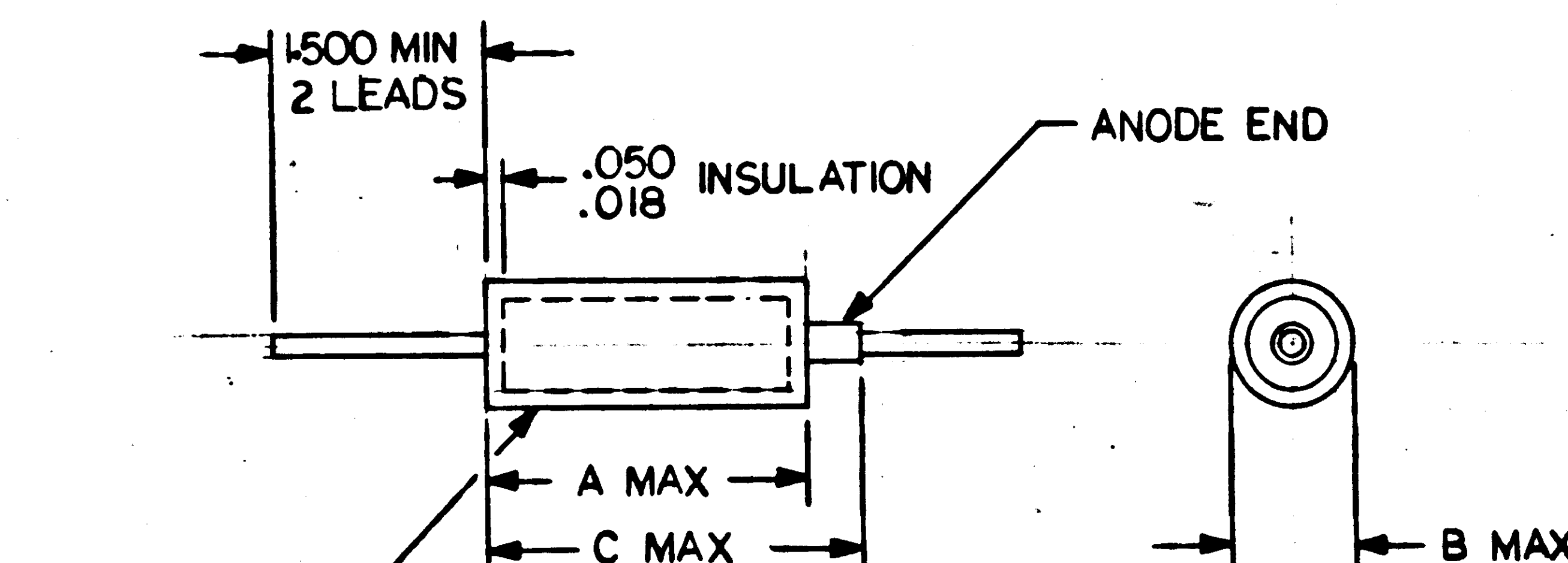
- E_{C1} = AC COMPONENT ACROSS C_1 (RMS)
 E_{R1} = AC COMPONENT ACROSS R_1 (RMS)
 E_A = AC VOLTAGE APPLIED (RMS)
 R_1 = VALUE FROM TABLE I

TABLE I

CASE SIZE	NOMINAL LEAD SIZE	DIMENSIONS		
		A	B	C
A	NO. 24 AWG	.384	.151	.422
B	(.020 DIA)	.572	.201	.610
C	NO. 22 AWG	.784	.305	.822
D	(.025 DIA)	.884	.367	.922

G	H
F	F
E	E
SHEET 1	SHEET 2
REVISION STATUS OF SHEETS	

	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON
	FRACTIONS DECIMALS ANGLES
	± ± ±
	DO NOT SCALE THIS DRAWING
	MATERIAL
	SEE NOTES
	HEAT TREATMENT
NEXT ASSY	USED ON
APPLICATION	FINAL FINISH



REPLACES REV D WITH CHANGES

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS			
MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.		MANNED SPACECRAFT CENTER HOUSTON, TEXAS	
DRAWN <i>Louis A. Lee</i> DATE 5-4-63 CHECKED <i>Joe G. Lee</i> 5/7/63 APPROVAL <i>Edna C. Hall</i> 10/26/63		CAPACITOR FIXED ELECTROLYTIC SOLID TANTALUM SPECIFICATION CONTROL DRAWING	
NASA APPROVAL <i>W. H. G. 8/4/63</i> MIT APPROVAL <i>W. H. G. 8/4/63</i>		CODE IDENT NO. SIZE C	NASA DRAWING NO. 1006755
SCALE		WT	SHEET 1 OF 2

