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0029001

REVISIONS 03038

SYM	DESCRIPTION	DATE	APPROVAL
-	INITIAL RELEASE CLASS A PER TDRR03038	10/16/63	WHL

NOTES:

1. GENERAL REQUIREMENTS:

- INTERPRET DRAWING IN ACCORDANCE WITH THE STANDARDS PRESCRIBED BY MIL-D-70327.
- UNITS SHALL MEET THE GENERAL REQUIREMENTS OF MIL-S-19500.
- SUPPLIERS SHALL CONFORM TO THE QUALITY ASSURANCE PROVISIONS CONTAINED IN ND 1015404, CLASS 2.
- UNITS SHALL BE CAPABLE OF MEETING THE QUALIFICATION REQUIREMENTS OF ND 1002054.
- PACKING AND PACKAGING: UNIT PACKING AND PACKAGING IN ACCORDANCE WITH LEVEL A OF MIL-S-19491.
- MARKING: UNIT PACKAGES AND EXTERIOR SHIPPING CONTAINERS SHALL BE MARKED PER MIL-STD-129 WITH THE MANUFACTURER'S NAME/OR SYMBOL AND TYPE DESIGNATION; THE NASA DRAWING NUMBER, DASH NUMBER AND REVISION LETTER SHALL ALSO BE INCLUDED. UNITS SHALL BE MARKED WITH THE MANUFACTURER'S SYMBOL/OR TYPE DESIGNATION WITH A BLACK BAND DENOTING CATHODE END.

2. ACCEPTANCE AND INSPECTION REQUIREMENTS:

A. MECHANICAL PROPERTIES:

- LEAD MATERIAL: SHALL BE IRON-NICKEL ALLOY PER ND PS 1015401. MATERIAL CERTIFICATION MUST ACCOMPANY EACH SHIPMENT.
- LEAD BEND TEST: EACH LEAD SHALL BE CAPABLE OF WITHSTANDING A LEAD BEND TEST IN ACCORDANCE WITH MIL-STD-750, METHOD 2036, TEST CONDITION E. A WEIGHT OF 16 ± 1 OUNCES SHALL BE APPLIED TO EACH LEAD.
LEAD PULL TEST: EACH LEAD SHALL BE CAPABLE OF WITHSTANDING A LEAD PULL TEST IN ACCORDANCE WITH MIL-STD-750, METHOD 2036, TEST CONDITION A WITH A STRAIGHT AXIAL PULL OF FOUR (4) POUNDS MINIMUM FOR ONE (1) MINUTE.
NO MECHANICAL DAMAGE OR LACK OF PERFORMANCE SHALL BE EVIDENCED AFTER THESE TESTS.
- REVERSE LEAKAGE CURRENT (I_R) PER TABLE I.

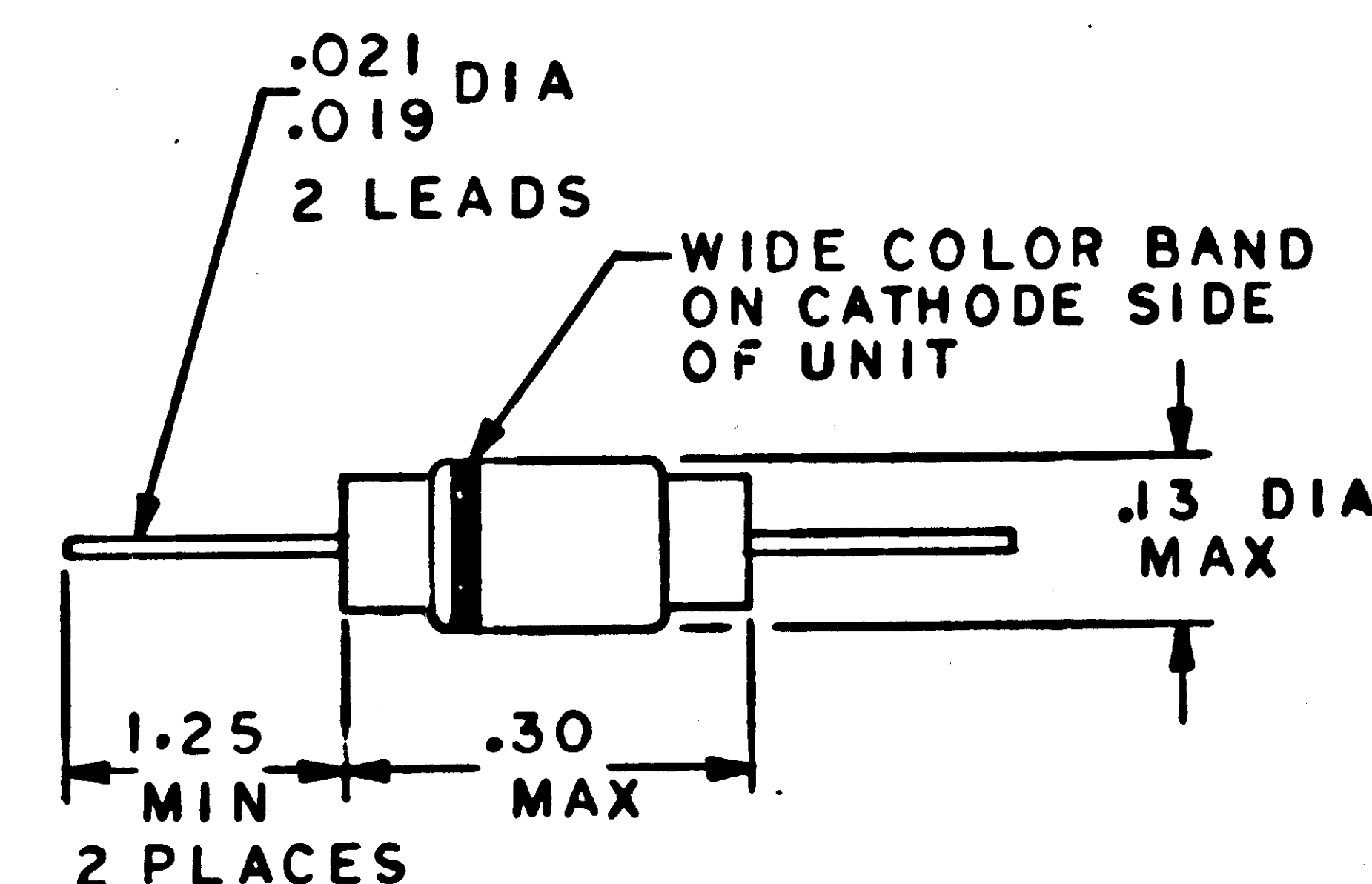
3. DESIGN REQUIREMENTS:

- OPERATING LIFE: UNITS SHALL BE CAPABLE OF 2000 HOURS MINIMUM OPERATION WITHIN THE PRESCRIBED LIMITS.
- STORAGE LIFE: 1 YEAR MINIMUM AT ROOM TEMPERATURE WITHOUT ANY MECHANICAL OR ELECTRICAL DETERIORATION.
- CONSTRUCTION: HERMETICALLY SEALED. FUSED GLASS TO METAL AND WELDED METAL TO METAL SEALS.
- CAPACITANCE CHANGE VS. TEMPERATURE: CHANGE IN CAPACITANCE AT -2.0 VOLTS $\pm 5\%$ FROM 0°C TO 80°C SHALL BE LESS THAN 5% .

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

TABLE I

DASH NO.	CAPACITANCE $\pm 1\text{MC}$ PICO FARADS $\pm 2\%$ AT 4VDC $\pm .5\text{V}$	CAPACITANCE RANGE PICO FARADS $\pm 1\text{MC}$		DC WORKING VOLTS - MAX	QUALITY FACTOR AT 50 MC			IR $\pm .00\text{VDC}$ AND 80°C NANOAMPS MAX
		AT 20VDC	AT 0.1VDC		AT 4VDC MINIMUM	AT 4VDC TYPICAL	AT MAX WV TYPICAL	
-1	47	≤ 24	≥ 120	20	7.0	15	32	5



QTY REQD		PART OR IDENTIFYING NO.		NOMENCLATURE OR DESCRIPTION		FIND NO.
LIST OF MATERIALS						
MIT INSTRUMENTATION LAB CAMBRIDGE, MASS. CONTRACT				MANNED SPACECRAFT CENTER HOUSTON, TEXAS		
DRAWN <i>J. C. Gresh</i> DATE <i>5/9/63</i> CHECKED <i>J. Rapp</i> DATE <i>7/1/63</i> APPROVAL <i>G. MAYO</i> DATE <i>7/1/63</i> APPROVAL <i>E. C. H. 9/2/63</i>				SEMICONDUCTOR DEVICE VOLTAGE VARIABLE CAPACITOR SPECIFICATION CONTROL DRAWING		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES $\pm$ $\pm$ $\pm$ DO NOT SCALE THIS DRAWING MATERIAL SEE NOTES HEAT TREATMENT FINAL FINISH				CODE IDENT NO. SIZE NASA DRAWING NO. <i>C</i> 1006700		
NEXT ASSY USED ON APPLICATION				SCALE NONE WT SHEET 1 OF 1		

