

1. GENERAL:

1. **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 OUNCES PLUS OR MINUS 1 OUNCE SHALL BE APPLIED TO EACH LEAD. THE LEAD SHALL BE RESTRICTED SUCH THAT THE BEND STARTS 3/32 INCH PLUS OR MINUS 1/32 INCH FROM THE BODY OF THE DEVICE. NO MECHANICAL DAMAGE OR LACK OF ELECTRICAL PERFORMANCE SHALL BE EVIDENCED AFTER THIS TEST.
2. **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 STRAIN IN AXIAL PULL OF 4 POUNDS MINIMUM FOR 1 MINUTE. NO MECHANICAL DAMAGE OR LACK OF ELECTRICAL PERFORMANCE SHALL BE EVIDENCED AFTER THIS TEST.

SEE NOTE (2)

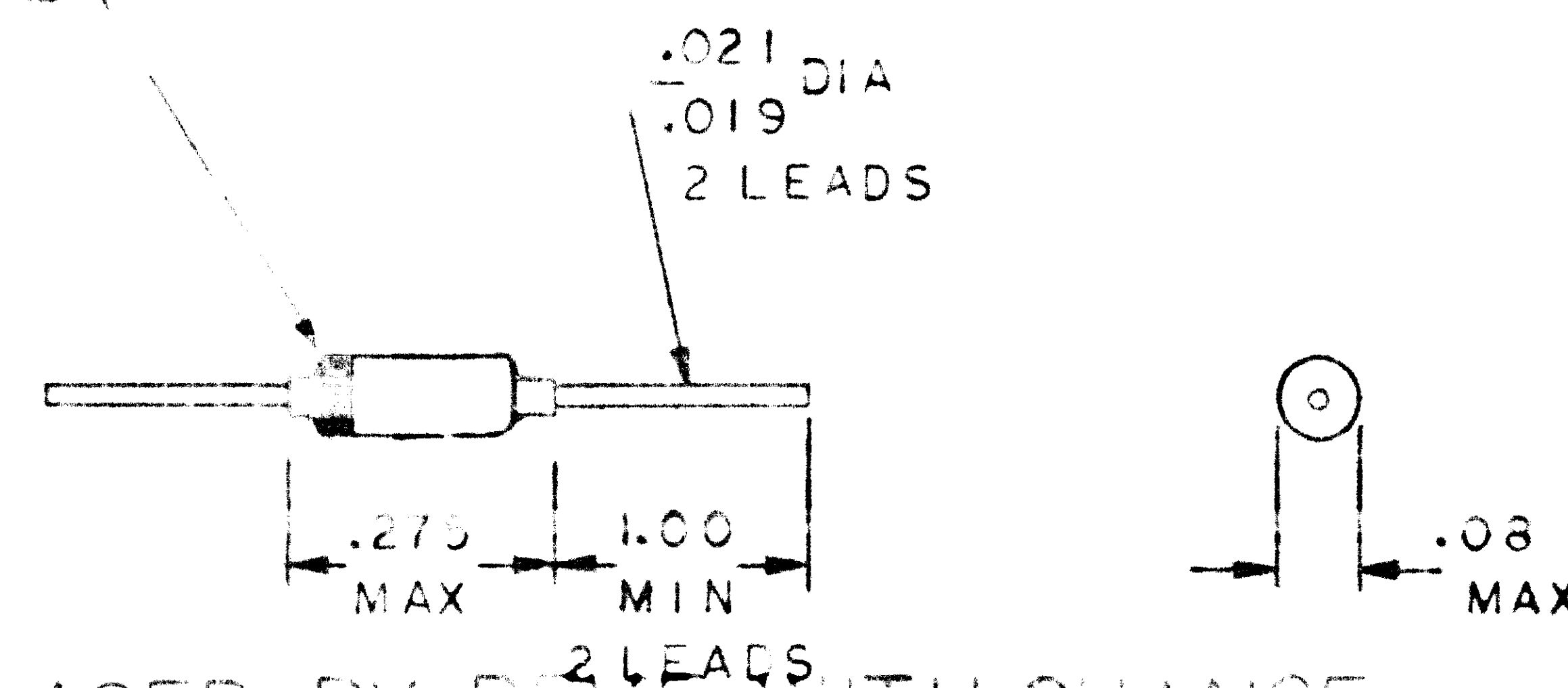
- | | | | |
|------|------|---------------------------|---------|
| 10 | 404 | | |
| 10 | 40 | | |
| 2 | 20 | | |
| 1.75 | 1.85 | | |
| 1.25 | 1 | | |
| | | F | F |
| | | SHEET 1 | SHEET 2 |
| | | REVISION STATUS OF SHEETS | |

A. ABSOLUTE MAXIMUM RATINGS:

-
- FIGURE 1
- TEST CIRCUIT - REVERSE RECOVERY TIME
- PULSE GENERATOR
50 OHMS
 $t_r \leq 0.25 \text{ nsec}$
- DIODE UNDER TEST
- ATTENUATOR
600 OHMS
50 OHMS
- SAMPLING SCOPE
50 OHMS
 $t_r \leq 0.4 \text{ nsec}$
- 0.01 μF
- 500 OHMS
- $I_f = +200 \text{ MA}$

FIGURE 1

TEST CIRCUIT - REVERSE RECOVERY TIME



PLACED BY REV² WITH CHANGE

F REPLACES REV E WITH CHANGES

- B. CONSTRUCTION: GLASS, HERMETICALLY SEALED ENCLOSURE.
- C. THERMAL SHOCK: UNITS SHALL BE CAPABLE OF WITHSTANDING A THERMAL SHOCK IN SILICOIL OIL FROM ZERO DEGREES CENTIGRADE TO +300 DEGREES CENTIGRADE FOR 5 COMPLETE CYCLES. TOTAL IMMERSION TIME EACH HALF CYCLE SHALL BE 90 SECONDS. ELAPSED TRANSFER TIME FROM ONE TEMPERATURE EXTREME TO THE OTHER SHALL NOT EXCEED 3 SECONDS.
- UNITS SHALL SHOW NO PHYSICAL DAMAGE OR LACK OF ELECTRICAL PERFORMANCE AFTER THERMAL SHOCK.

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

500 OHMS $I_f = +200 \text{ MA}$		CITY OR FIELD DISTRICT NO.		STATE OR DISTRICT OR NO.	
DIMENSIONS ARE IN INCHES FRACTIONS DECIMALS AN.		INSTR. LOCATION LAB GARRISON, N. C.		MAINTENANCE CENTER HOUSTON, TEXAS	
DO NOT SCALE THIS DRAWING		DRAWN CHECKED APPROVAL		SEMICONDUCTOR DEVICE, 0.006	
SEE NOTES		PERSONAL		SPECIFICATION CONTROL DRAWING	
NEXT ASSY USED ON		ASA APPROVAL 17-17-63		C 1005731	
APPLICATION		MI APPROVAL		1005731	

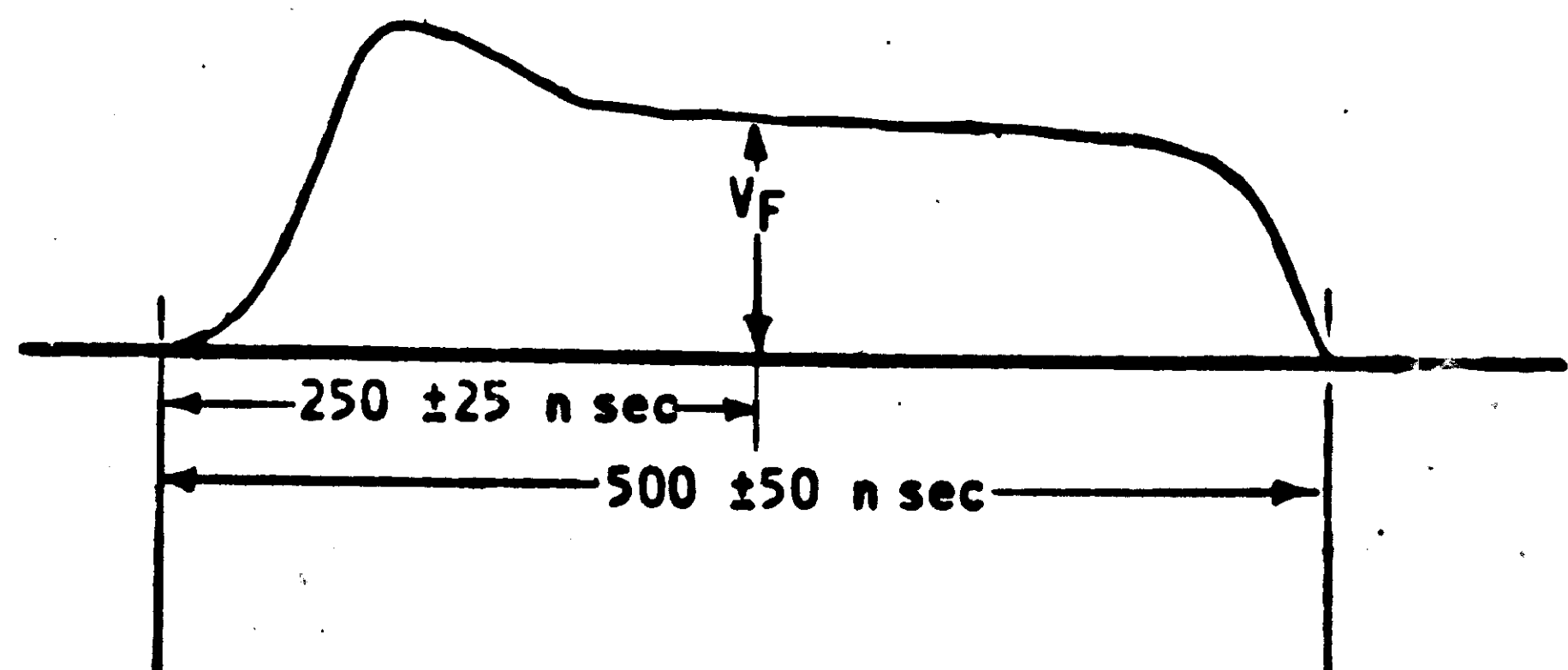
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F 1006751

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
F	REPLACES REV. E WITH CHANGES AND UPGRADED TO CLASS A RELEASE PER TDRR 02006	7/17/63	Jef

TABLE I
ELECTRICAL CHARACTERISTICS

ALL MEASUREMENTS AT 25°C ± 3°C UNLESS OTHERWISE NOTED						
ITEM	PARAMETER	SYMBOL	CONDITIONS	LIMITS		UNITS
				MIN	MAX	
1	REVERSE CURRENT	I_R	$V_R = 25$ VOLTS MIN	-	50	NANOAMPS
2	REVERSE BREAKDOWN VOLTAGE	BV	$I_R = 100$ UA	30	-	VOLTS
3	REVERSE RECOVERY TIME (SEE TEST CIRCUIT FIGURE 1)	t_{rr}	$I_F = 200$ MA $I_R = 200$ MA RECOVER TO 20 MA	-	4	NANOSECONDS
4	FORWARD VOLTAGE DROP MIL-STD-750 METHOD 4026	V_F	$I_F = 40$ MA RISE TIME ≤ 100 NANOSEC DUTY CYCLE ≤ 1% SEE FIG. 2	.750	.850	VOLTS
5	FORWARD VOLTAGE DROP MIL-STD-750 METHOD 4026	V_F	$I_F = 400$ MA RISE TIME ≤ 100 NANOSEC DUTY CYCLE ≤ 1%, SEE FIG 2	-	1.25	VOLTS
6	CAPACITANCE	C	$V_R = 0$ VDC $f = 1$ MC		3.5	PICOFARADS
7	REVERSE CURRENT	I_R	AT 150°C $V_R = 25$ VOLTS MIN		10	MICROAMPS



OUTPUT VOLTAGE WAVE SHAPE
FIGURE 2

MASTER

F REPLACES REVE 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 <u>G. Cooper</u> DATE <u>27 June 63</u> CHECKED <u>H. Hayward</u> DATE <u>27 June 63</u> APPROVAL <u>E. C. Hall</u> DATE <u>10 July 63</u>		SEMICONDUCTOR DEVICE, DIODE	
NESA APPROVAL <u>W. J. Rhine</u> DATE <u>7-17-63</u> MIT APPROVAL <u>H. J. Hall</u> DATE <u>7/17/63</u>		SPECIFICATION CONTROL DRAWING	
CODE IDENT NO. <u>C</u> SCALE NONE		NESA DRAWING NO. <u>1006751</u> SHEET 2 OF 2	

