

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 NOR ANY OBLIGATION WHATSOEVER, AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, 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 CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THEREBY.

#### REQUIREMENTS:

##### 1. GENERAL:

- INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
- UNITS SHALL MEET THE REQUIREMENTS OF MIL-S-19500 EXCEPT AS, AND IN ADDITION TO THE REQUIREMENTS SPECIFIED HEREIN.
- SUPPLIER SHALL CONFORM TO THE QUALITY ASSURANCE PROVISIONS CONTAINED IN ND 1015404, CLASS 2.
- MARKING: UNITS SHALL BE MARKED IN ACCORDANCE WITH ND 1002019 WITH THE MANUFACTURER'S IDENTIFICATION, DATE CODE, DIFFUSION SUB-LOT CODE, KEYING STRIPE, AND THE NUMBER 321. THE BACK OF THE PACKAGE MAY BE UTILIZED FOR THE DIFFUSION SUB-LOT NUMBER.
- PREPARATION FOR DELIVERY SHALL BE IN ACCORDANCE WITH ND 1002215, CLASS I, CODE 2.
  - MARKING OF SHIPPING CONTAINERS SHALL CONFORM TO THE MARKING OF UNIT AND INTERMEDIATE PACKAGES AND THE METHODS OF MARKING AS SPECIFIED IN ND 1002215.
- THE SHIPMENT LOTS, MADE UP OF UNITS AS SPECIFIED BY THIS DRAWING, MUST MEET THE REQUIREMENTS OF ND 1002248, WHEN PROCESSED AS SPECIFIED IN ND 1002248, PERFORMED AT THE BUYERS PLANT.

##### 2. ACCEPTANCE AND INSPECTION: QUALITY DEMONSTRATION PER TABLES I AND II.

###### A. DEFINITIONS:

- A SHIPMENT LOT IS DEFINED AS A GROUP OF PARTS ASSEMBLED FROM DIFFUSION SUB-LOTS AND DATE CODES WHICH ARE SHIPPED AT ONE TIME WHICH HAVE BEEN FABRICATED IN A SINGLE CONTINUOUS PRODUCTION RUN USING LIKE MATERIALS WHICH ARE CONTROLLED USING A CONTROLLED PROCESS. NO PROCESS CHANGES DEFINED AS CRITICAL BY ND 1015404 NEGOTIATION MAY BE CHANGED DURING THE FABRICATION OF A SHIPMENT LOT. MAXIMUM NUMBER OF UNITS SHIPPED IN A LOT SHALL BE 5,000. A MAXIMUM OF 100 DIFFUSION SUB-LOTS MAY BE USED TO ASSEMBLE ONE SHIPMENT LOT. A SHIPMENT LOT MAY INCLUDE MORE THAN ONE DATE CODE LOT.
- A DIFFUSION SUB-LOT IS DEFINED AS A GROUP OF PARTS FABRICATED FROM MATERIALS WHICH WERE PROCESSED THROUGH DIFFUSION MASKING, ETCHING AND METALLIZATION AT ONE TIME (A SINGLE BATCH). THIS SUB-LOT IDENTIFICATION MUST BE MAINTAINED THROUGH SUBSEQUENT STAGES OF ASSEMBLY AND TEST. A DIFFUSION SUB-LOT SHALL BE SEALED WITH ONLY ONE DATE CODE.
- DATE CODE LOT IS DEFINED AS THOSE UNITS SEALED DURING ONE WEEK.

###### B. TEST CONDITIONS:

- THE TESTS AS DEFINED IN TABLES I SHALL BE PERFORMED BY THE QUALITY CONTROL DEPARTMENT OF THE VENDOR.
- UNLESS OTHERWISE SPECIFIED HEREIN ALL ELECTRICAL TESTS MUST BE REFERENCED TO AN AMBIENT TEMPERATURE OF PLUS 25 PLUS OR MINUS 1/2 DEGREE CENTIGRADE.
- THE PRE-SEAL TEST PER TABLE I SHALL BE PERFORMED AFTER THE FINAL PRODUCTION INTERNAL VISUAL INSPECTION AND PRIOR TO SEALING.

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

C. VENDOR SUPPLIED INFORMATION: THE FOLLOWING DATA AND INFORMATION IS TO BE SUPPLIED WITH EACH SHIPMENT. ALL INFORMATION SUPPLIED WILL REFERENCE THE UNIT PART NUMBER, APPLICABLE PURCHASE ORDER NUMBER, QUANTITY AND DATE OF SHIPMENT, AND THE APPLICABLE DATE CODES OR DIFFUSION LOT CODES.

- A CERTIFICATE OF COMPLIANCE COVERING LEAD MATERIAL REQUIREMENTS OF PARAGRAPH 3.C.(3).
- A CERTIFICATE OF COMPLIANCE COVERING THE REQUIREMENTS OF ND 1015404.
- THE NOMINAL LEAD DIMENSIONS AS REQUIRED BY PARAGRAPH 2.E.
- THE PRESEAL INSPECTION DATA REQUIRED BY PARAGRAPH 4.C.
- THE SUBGROUP 1 AND 3 TEST DATA REQUIRED BY TABLE II.

###### D. SELECTION OF UNITS FOR TEST:

- THE SAMPLE USED FOR TABLE II SHALL BE RANDOMLY SELECTED FROM THE ENTIRE GROUP OF UNITS WHICH CONSTITUTE A SHIPMENT LOT.
- A SHIPMENT LOT MAY BE RESUBMITTED FOR TABLE II SUBGROUP 1 AND 3. THE REQUIREMENT OF MIL-S-1900c GROUP 1 & 3 FOR LOT RESUBMITTAL SHALL APPLY WITH THE TIGHTENED INSPECTION FOR THE CHARACTERISTICS WHICH FAILED.

1006321

#### REVISIONS

| SYM | ZONE | DESCRIPTION                        | DR | CHK | DATE | APPROVED |
|-----|------|------------------------------------|----|-----|------|----------|
| D   |      | REDRAWN AND REVISED PER TDRR 19259 |    |     |      |          |

Ⓢ REPLACES REV(C) WITH CHANGES

MASTER

|                                             |                         |                                            |                             |              |
|---------------------------------------------|-------------------------|--------------------------------------------|-----------------------------|--------------|
| QTY REQD                                    | PART OR IDENTIFYING NO. | MATERIAL OR NOTES                          | NOMENCLATURE OR DESCRIPTION | FIND NO.     |
| LIST OF MATERIALS                           |                         |                                            |                             |              |
| MIT INSTRUMENTATION LAB<br>CAMBRIDGE, MASS. |                         | MANNED SPACECRAFT CENTER<br>HOUSTON, TEXAS |                             |              |
| DRAWN <i>St. Wong</i>                       |                         | 27 MAR 65                                  |                             |              |
| CHECKED <i>A. M. 27</i>                     |                         | 6-2-65                                     |                             |              |
| APPROVED <i>D. Hanley</i>                   |                         | 1 Jun 65                                   |                             |              |
| APPROVED <i>Edson C. Hall</i>               |                         | 2 Jun 65                                   |                             |              |
| APPROVED MIT <i>W. K. 27</i>                |                         | 27 Jun 65                                  |                             |              |
| APPROVED MSC <i>W. J. 27</i>                |                         | 27 Jun 65                                  |                             |              |
| DATE                                        |                         | SCALE                                      | NONE                        | SHEET 1 OF 5 |

|                                                                                                                                                                                                                          |          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>CAPACITOR VALUES ARE IN $\mu$ f<br>RESISTOR VALUES ARE IN OHMS<br>TOLERANCES ON<br>FRACTIONS DECIMALS ANGLES<br>$\pm$ $\pm$ $\pm$<br>DO NOT SCALE THIS DRAWING | MATERIAL |
| NEXT ASSY                                                                                                                                                                                                                | USED ON  |
| APPLICATION                                                                                                                                                                                                              |          |



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2. E. LEAD DIMENSIONS: THE PARTS SUPPLIED IN ANY SHIPMENT LOT MUST BE UNIFORM WITH RESPECT TO LEAD DIMENSIONS. THE LEAD THICKNESS SHALL BE WITHIN  $\pm 0.0005$  INCHES OF A NOMINAL VALUE TO BE SPECIFIED BY THE VENDOR. THE LEAD WIDTH SHALL BE WITHIN  $\pm 0.001$  INCHES OF A NOMINAL VALUE ALSO TO BE SUPPLIED. THE NOMINAL VALUES FOR EACH SHIPPING LOT WILL BE SUPPLIED WITH THE APPLICABLE SHIPMENT.

3. DESIGN:

A. ABSOLUTE MAXIMUM RATINGS AT 25°C AMBIENT:

- (1) VOLTAGE TO PIN 10: PLUS 10.0 VOLTS WITH RESPECT TO PIN 5.
- (2) VOLTAGE APPLIED TO ANY INPUT PIN PLUS OR MINUS 4 VOLTS WITH RESPECT TO PIN 5.
- (3) THERMAL RESISTANCE, JUNCTION-CASE. ( $\theta_{JC}$ ): 200°C/WATT.
- (4) THERMAL RESISTANCE, JUNCTION-AMBIENT. ( $\theta_{JA}$ ): 500°C/WATT.

B. TEMPERATURE:

- (1) TEMPERATURE RANGE, JUNCTION, OPERATING: -55°C TO +125°C.
- (2) TEMPERATURE RANGE, JUNCTION, STORAGE: -65°C TO +150°C.
- (3) TEMPERATURE, SOLDERING LEADS: +250°C (1 MINUTE MAX).

C. CONSTRUCTION:

- (1) SEMICONDUCTOR: SILICON, NPN.
- (2) ENCLOSURE: A HERMETICALLY SEALED PACKAGE ELECTRICALLY ISOLATED FROM POWER OR GROUND, THE DIMENSIONS OF WHICH MEET THE REQUIREMENTS OF FIGURE 1 AND PARAGRAPH 2.E.

(3) LEADS:

LEAD MATERIAL SHALL BE IN ACCORDANCE WITH NASA DOCUMENT PS 1015402 WITH THE FOLLOWING EXCEPTIONS:  
GOLD PLATE SHALL BE A MINIMUM OF 100 AND A MAXIMUM OF 200 MICRO INCHES. THE NICKEL STRIKE UNDER THE GOLD SHALL BE OPTIONAL BUT IF USED SHALL BE A MAXIMUM OF 100 MICRO INCHES, AND PARAGRAPH 3.4.2 SHALL NOT APPLY. CERTIFICATE OF COMPLIANCE FOR LEAD MATERIAL SHALL ACCOMPANY EACH LOT SHIPPED.

4. TEST METHODS: (REF. MIL-STD-750 WITH EXCEPTIONS NOTED BELOW).

- A. AVERAGE PROPAGATION DELAY ( $T_p$ ): MEASUREMENTS SHALL BE PERFORMED ON EACH INPUT USING TEST CIRCUIT SPECIFIED IN FIGURE 1 MADE UP OF ACCEPTABLE UNITS WHERE  $T_p = (T_1 + T_2)/2$ . VOLTAGE 4V  $\pm 10\%$  DURING TEST ALL UNUSED BASES SHALL BE GROUND.

D 1006321

REVISIONS

| SYM | ZONE | DESCRIPTION                        | DR | CHK | DATE | APPROVED |
|-----|------|------------------------------------|----|-----|------|----------|
| D   |      | REDRAWN AND REVISED PER TDRR 19259 |    |     |      |          |

ⓐ REPLACES REV(C) WITH CHANGES

MASTER

|                                             |                         |                                                               |                             |          |
|---------------------------------------------|-------------------------|---------------------------------------------------------------|-----------------------------|----------|
| QTY REQ                                     | PART OR IDENTIFYING NO. | MATERIAL OR NOTES                                             | NOMENCLATURE OR DESCRIPTION | FIND NO. |
| LIST OF MATERIALS                           |                         |                                                               |                             |          |
| MIT INSTRUMENTATION LAB<br>CAMBRIDGE, MASS. |                         | MANNED SPACECRAFT CENTER<br>HOUSTON, TEXAS                    |                             |          |
| DRAWN <i>Al Wang</i>                        | 27 MAY 65               | DUAL NOR GATE<br>(FLAT PACK)<br>SPECIFICATION CONTROL DRAWING |                             |          |
| CHECKED <i>A. M. a. s.</i>                  | 6-2-65                  |                                                               |                             |          |
| APPROVED <i>P. D. Hanley</i>                | 1 Jun 65                | CODE IDENT NO. SIZE DRAWING NO.<br>80230 C 1006321            |                             |          |
| APPROVED <i>Edwin C. Hall</i>               | 2 Jan 65                |                                                               |                             |          |
| APPROVED MIT <i>W. R. Kuylen</i>            | 2 Feb 65                | SHEET 2 OF 5                                                  |                             |          |
| APPROVED MSC <i>W. J. Kuylen</i>            | 6-2-65                  |                                                               |                             |          |
| DATE                                        |                         | SCALE NONE                                                    |                             |          |

|                                                                                                                                                                                                                          |          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>CAPACITOR VALUES ARE IN $\mu$ f<br>RESISTOR VALUES ARE IN OHMS<br>TOLERANCES ON<br>FRACTIONS DECIMALS ANGLES<br>$\pm$ $\pm$ $\pm$<br>DO NOT SCALE THIS DRAWING | MATERIAL |
| SEE NOTE                                                                                                                                                                                                                 |          |
| NEXT ASSY                                                                                                                                                                                                                | USED ON  |
| APPLICATION                                                                                                                                                                                                              |          |

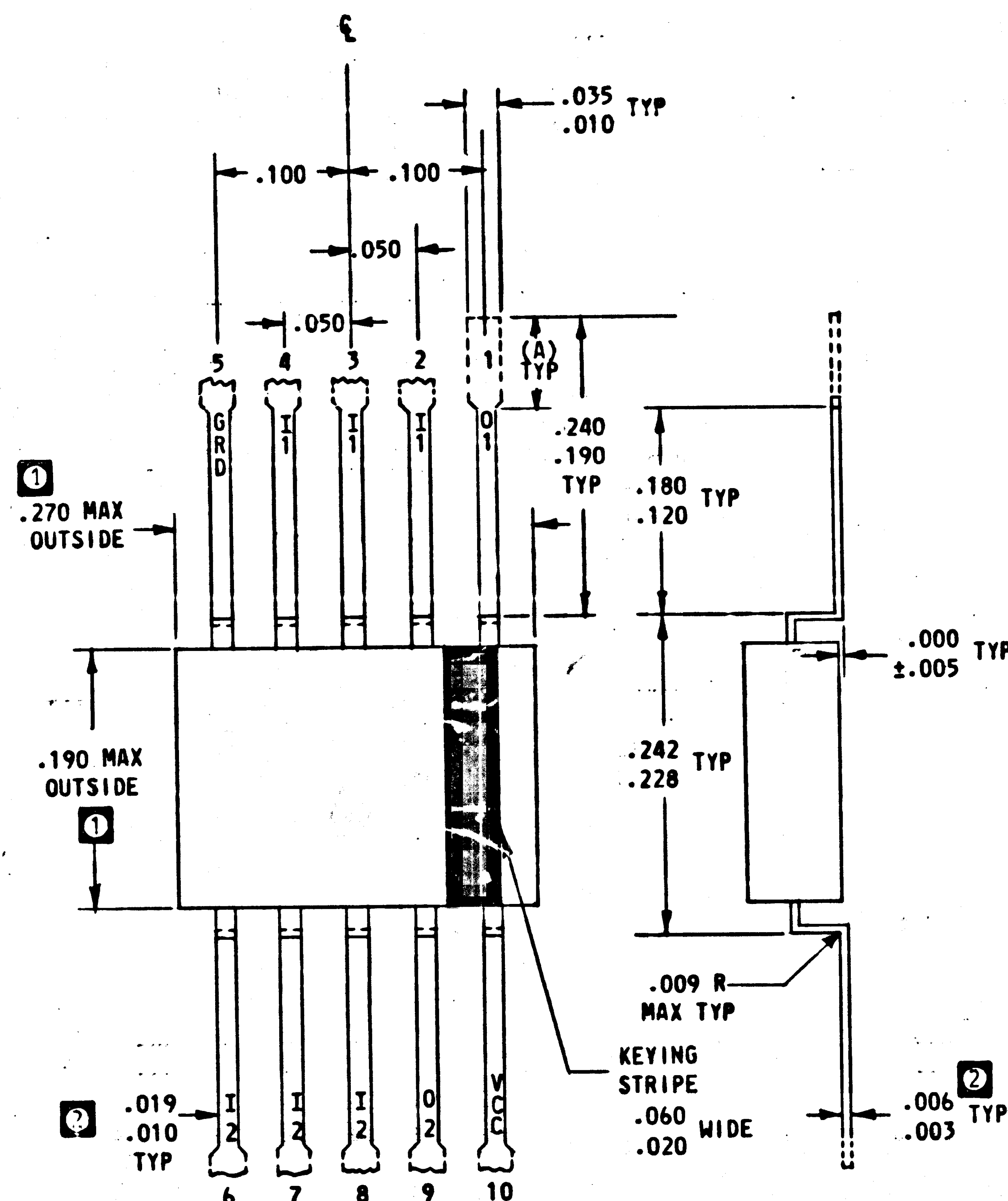


C. PRESEAL VISUAL INSPECTION: THE PRESEAL VISUAL INSPECTION SHALL BE PERFORMED USING THE REJECTION CRITERIA OF ND 1002257 REV A. THE DIFFUSION SUBLOT SHALL BE UTILIZED FOR SAMPLING SPECIFIED IN TABLE I. DATA SHALL ACCOMPANY EACH SHIPMENT COVERING THE NUMBER OF SUB-LOTS TESTED, THE NUMBER OF UNITS THAT FAILED FROM EACH SUB-LOT, THE CAUSE OF FAILURE, AND THE NUMBER OF TIMES EACH SUB-LOT WAS RESUBMITTED TO TABLE I TEST.

PRE SEAL VISUAL INSPECTION

| PRE SEAL VISUAL INSPECTION       |                              |                              |
|----------------------------------|------------------------------|------------------------------|
| TEST                             | TEST CONDITIONS              | DIFFUSION<br>SUB-LOT         |
| VISUAL<br>INTERNAL<br>INSPECTION | SEE NOTE 2.C.(4)<br>AND 4.C. | LTPD* = 7<br>MAX ACC NO. = 1 |

**2 SEE PARAGRAPH 2.E.**



**FIGURE 1**

|                                                                         |          |        |
|-------------------------------------------------------------------------|----------|--------|
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ON |          |        |
| DECIMALS                                                                | DECIMALS | ANGLES |
| .xx                                                                     | .xxx     | ±      |
| ±                                                                       | ±        |        |
| DO NOT SCALE DRAWING                                                    |          |        |
| MATERIAL                                                                |          |        |

| NEXT ASSY | USED ON |
|-----------|---------|
|           |         |

## APPLICATION

INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

(D) REPLACES REV(C) WITH CHANGES

|                                                |                            |                                            |                  |             |
|------------------------------------------------|----------------------------|--------------------------------------------|------------------|-------------|
| QTY<br>REQD                                    | PART OR<br>IDENTIFYING NO. | NOMENCLATURE OR<br>DESCRIPTION             |                  | FIND<br>NO. |
| LIST OF MATERIALS                              |                            |                                            |                  |             |
| MIT<br>INSTRUMENTATION LAB<br>CAMBRIDGE, MASS. |                            | MANNED SPACECRAFT CENTER<br>HOUSTON, TEXAS |                  |             |
| DWG NO.                                        | CONTRACT                   |                                            |                  |             |
| DRAWN <i>J. Wong</i>                           | DATE <i>24 MAY 65</i>      |                                            |                  |             |
| CHECKED <i>A. Marts</i>                        | <i>6-2-65</i>              |                                            |                  |             |
| APPROVAL <i>P.D. Hanley</i>                    | <i>1 June 65</i>           |                                            |                  |             |
| APPROVAL <i>Edson C. Hall</i>                  | <i>2 June 65</i>           |                                            |                  |             |
| APPROVAL                                       |                            | DUAL NOR GATE<br>(FLAT PACK)               |                  |             |
| APPROVAL                                       |                            | SPECIFICATION CONTROL DRAWING              |                  |             |
| NASA APPROVAL <i>W. J. Rhine</i>               | CODE IDENT NO.             | SIZE                                       | NASA DRAWING NO. |             |
| MIT APPROVAL                                   | 80230                      | C                                          | 1006321          |             |
| MIT APPROVAL <i>W. J. Rhine</i>                | SCALE NONE                 | WT                                         | SHEET 3 OF 5     |             |



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D 1006321

| REVISIONS |      |                                    |    |     |      |
|-----------|------|------------------------------------|----|-----|------|
| SYM       | ZONE | DESCRIPTION                        | DR | CHK | DATE |
| D         |      | REDRAWN AND REVISED PER TDRR 19259 |    |     |      |

TABLE II  
ACCEPTANCE INSPECTION \*\*

| TEST                                 | SYMBOL                   | TEST CONDITIONS                                               |            |        |            |             |         | LIMITS |      | UNITS | LOT                                          |
|--------------------------------------|--------------------------|---------------------------------------------------------------|------------|--------|------------|-------------|---------|--------|------|-------|----------------------------------------------|
|                                      |                          |                                                               |            |        |            |             |         | MIN    | MAX  |       |                                              |
| SUBGROUP 1                           |                          |                                                               |            |        |            |             |         |        |      |       |                                              |
| VISUAL AND MECHANICAL EXAMINATION    | -                        | METHOD 2071<br>SEE NOTE 3 D (6)                               |            |        |            |             |         | -      | -    |       | *LTPD = 10<br>MAX. ACC. NO. = 3              |
| SUBGROUP 2                           |                          | PIN 2.6                                                       | PIN 3.7    | PIN 5  | PIN 4.8    | PIN 1.9     | PIN 10  |        |      |       | 100% TESTING<br>REQUIRED                     |
| BASE CURRENT                         | I <sub>B</sub>           | +870±2mV                                                      | +1800±10mV | OV     | +1800±10mV |             | +4±.01V |        | 152  | uA    |                                              |
| BASE CURRENT                         | I <sub>B</sub>           | +1800±10mV                                                    | +870±2mV   | OV     | +1800±10mV |             | +4±.01V |        | 152  | uA    |                                              |
| BASE CURRENT                         | I <sub>B</sub>           | +1800±10mV                                                    | +1800±10mV | OV     | +870±2mV   |             | +4±.01V |        | 152  | uA    |                                              |
| OUTPUT VOLT PIN 1.9                  | V <sub>O</sub>           | +770±2mV                                                      | OPEN       | OV     | OPEN       |             | +4±.01V |        | 300  | mV    |                                              |
| OUTPUT VOLT PIN 1.9                  | V <sub>O</sub>           | OPEN                                                          | +770±2mV   | OV     | OPEN       |             | +4±.01V |        | 300  | mV    |                                              |
| OUTPUT VOLT PIN 1.9                  | V <sub>O</sub>           | OPEN                                                          | OPEN       | OV     | +770±2mV   |             | +4±.01V |        | 300  | mV    |                                              |
| SAT VOLT PIN 1.9                     | V <sub>S</sub>           | +870±2mV                                                      | OPEN       | OV     | OPEN       |             | +4±.01V |        | 220  | mV    |                                              |
| SAT VOLT PIN 1.9                     | V <sub>S</sub>           | OPEN                                                          | +870±2mV   | OV     | OPEN       |             | +4±.01V |        | 220  | mV    |                                              |
| SAT VOLT PIN 1.9                     | V <sub>S</sub>           | OPEN                                                          | OPEN       | OV     | +870±2mV   |             | +4±.01V |        | 220  | mV    |                                              |
| OUTPUT CURRENT PIN 1.9               | I <sub>O</sub>           | +500±2mV                                                      | +500±2mV   | OV     | +500±2mV   | +870±2mV    | +4±.01V | 760    |      | uA    |                                              |
| COLLECTOR-EMITTER THRESHOLD CURRENT  | I <sub>CEX</sub>         | +500±2mV                                                      | +500±2mV   | OV     | +500±2mV   | +1.00±.01V  | OPEN    |        | 15   | uA    |                                              |
| SUBGROUP 3                           |                          |                                                               |            |        |            |             |         |        |      |       |                                              |
| COLLECT. CUTOFF CURRENT              | I <sub>CEO</sub>         | OPEN                                                          | OPEN       | OV     | OPEN       | +5±.1V      | OPEN    |        | 100  | uA    | *LTPD = 5<br>(COMBINED)<br>MAX. ACC. NO. = 3 |
| EMITTER CUTOFF CURRENT               | I <sub>EB0</sub>         | OV                                                            | OV         | +4±.1V | OV         | OPEN        | OPEN    |        | 100  | uA    |                                              |
| COLLECT. CUTOFF CURRENT              | I <sub>CB0</sub>         | OV                                                            | OV         | OPEN   | OV         | +8±.1V      | OPEN    |        | 100  | uA    |                                              |
| INTERFACE TEST                       | B <sub>1</sub>           | 870±2mV                                                       | OPEN       | OV     | OPEN       | 5KΩ TO +10V | OPEN    |        | 400  | mV    |                                              |
| INTERFACE TEST                       | B <sub>2</sub>           | OPEN                                                          | 870±2mV    | OV     | OPEN       | 5KΩ TO +10V | OPEN    |        | 400  | mV    |                                              |
| INTERFACE TEST                       | B <sub>3</sub>           | OPEN                                                          | OPEN       | OV     | 870±2mV    | 5KΩ TO +10V | OPEN    |        | 400  | mV    |                                              |
| COLLECTOR-EMITTER SUSTAINING VOLTAGE | V <sub>CEO</sub><br>SUST | I <sub>C</sub> = 5 mA (PULSED) PINS 1.9 AND 5                 |            |        |            |             |         | 5      |      | VOLTS |                                              |
| AVERAGE PROPAGATION DELAY            | T <sub>p</sub>           | SEE NOTE 3D (4) AND FIGURE 1                                  |            |        |            |             |         |        | 24   | nsec  |                                              |
| COLLECTOR RESISTANCE                 | R <sub>L</sub>           | BETWEEN PINS 10 AND 1.9<br>MEASUREMENT CURRENT = 1 mA         |            |        |            |             |         | 2.7    | 4.15 | Kohms |                                              |
| D.C. CURRENT GAIN                    | h <sub>FE</sub>          | I <sub>C</sub> = 1 mA, V <sub>CE</sub> = 0.5V ALL TRANSISTORS |            |        |            |             |         | 30     | 200  |       |                                              |

- \* LTPD PER MIL-S-19500C, TABLE IV
- \*\* SAMPLE SIZE USED BY THE BUYER AND VENDOR SHALL BE THE SAME AND SHALL CORRESPOND TO THE MAX ACC NUMBER SPECIFIED IN MIL-S-19500C, TABLE IV.
- \*\*\* MEASUREMENTS TO BE MADE ON GATE 1 AND GATE 2.
- \*\*\*\* TEKTRONIX SAMPLING PROBE P6032 WITH 50X ATTENUATOR.
- \*\*\*\*\* TEST TO BE PERFORMED IN SEQUENCE INDICATED.

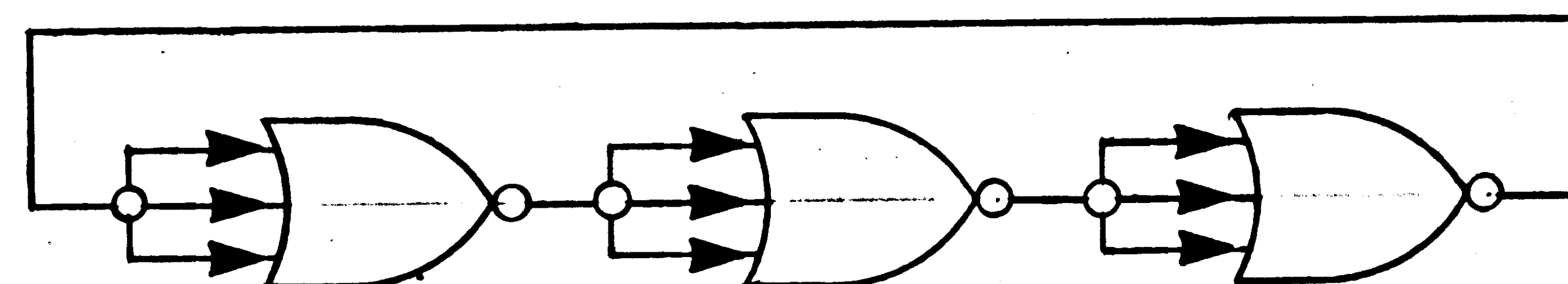
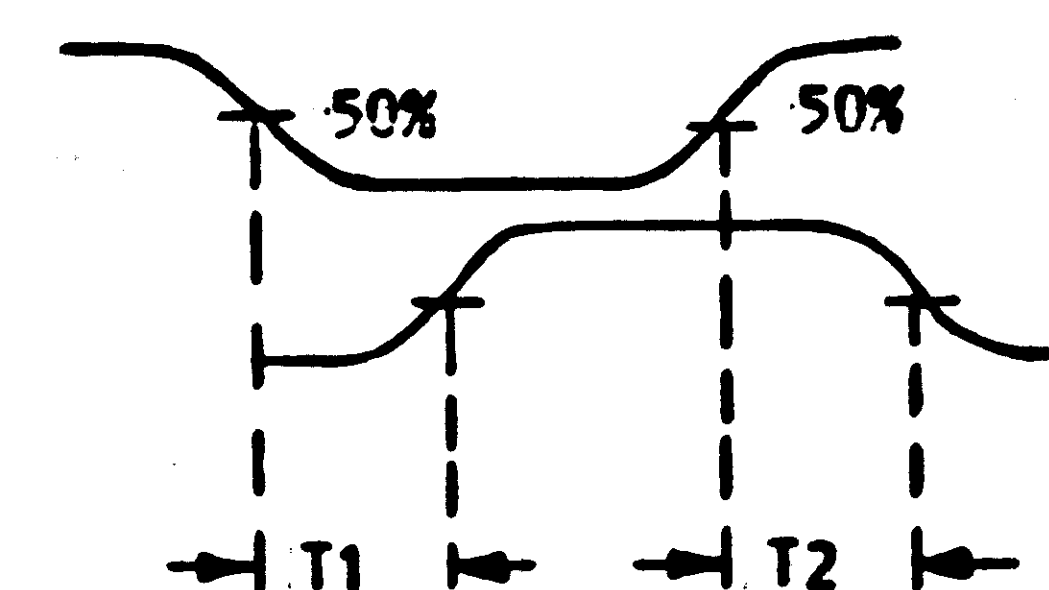
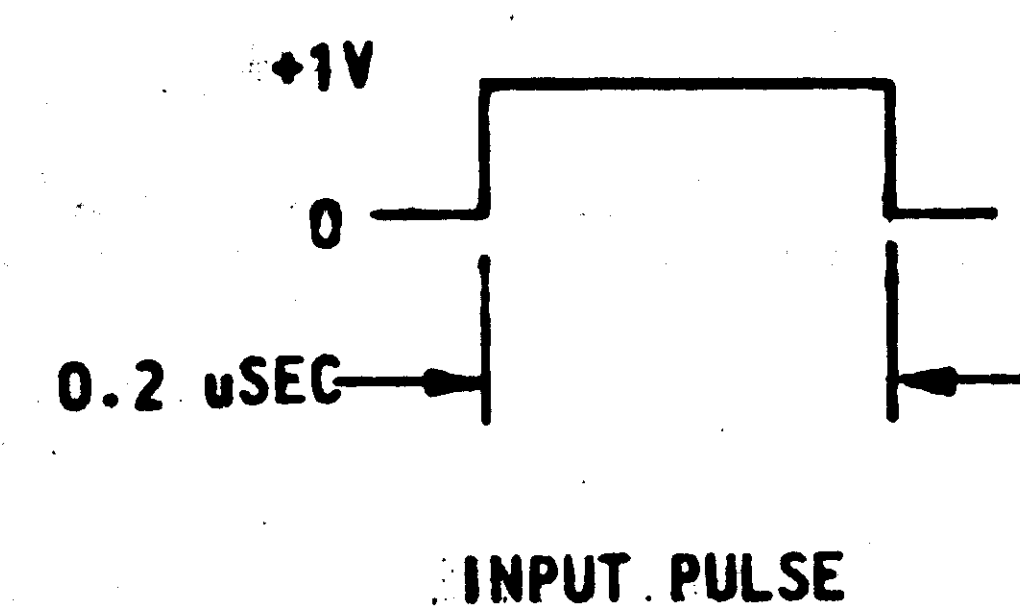
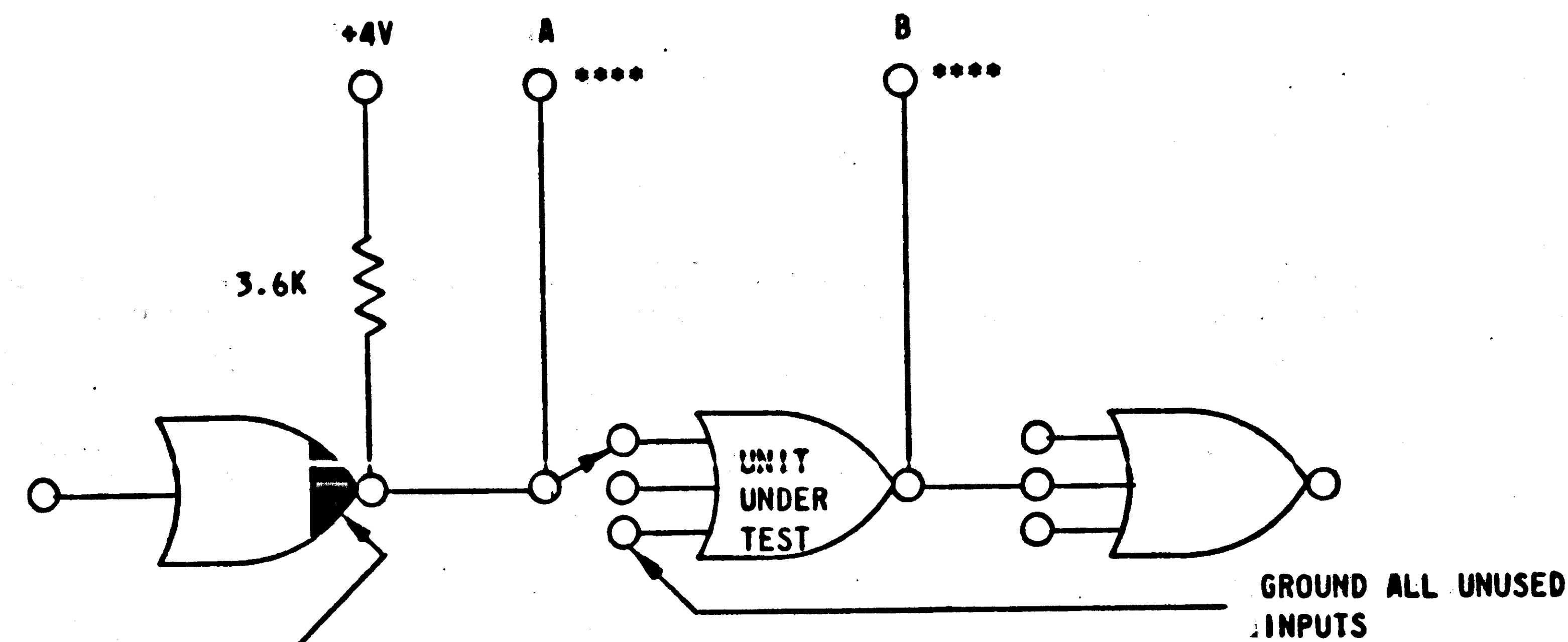
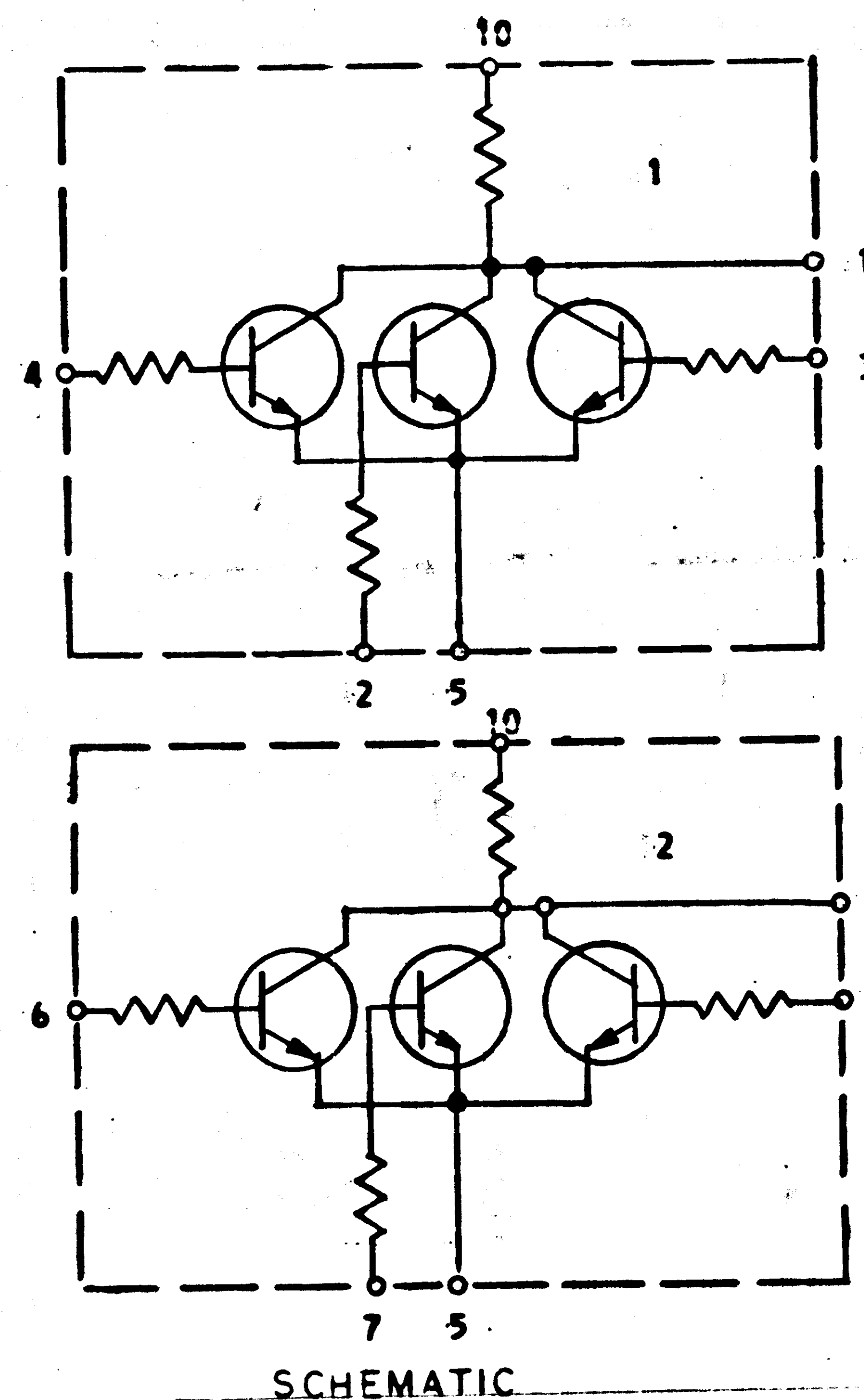
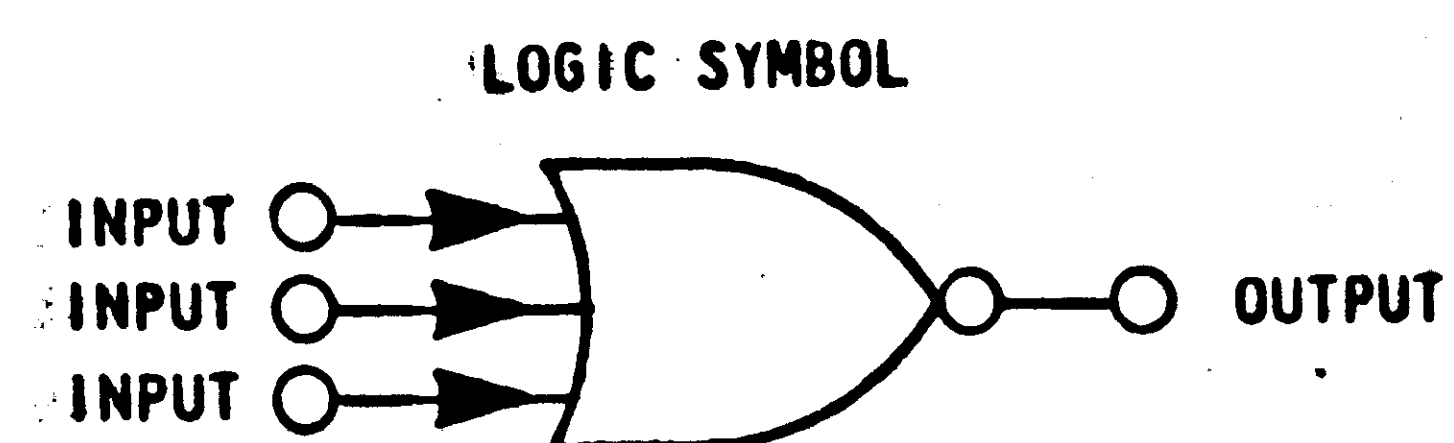
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| MIT INSTRUMENTATION LAB<br>CAMBRIDGE, MASS. |                         | MANNED SPACECRAFT CENTER<br>HOUSTON, TEXAS                    |                             |                     |
| DRAWN <i>G. Wong</i>                        | 27 MAY 65               | DUAL NOR GATE<br>(FLAT PACK)<br>SPECIFICATION CONTROL DRAWING |                             |                     |
| CHECKED <i>A. M. ...</i>                    | 6-2-65                  |                                                               |                             |                     |
| APPROVED <i>L. D. ...</i>                   | 1 June 65               |                                                               |                             |                     |
| APPROVED <i>E. ...</i>                      | 2 June 65               |                                                               |                             |                     |
| APPROVED MIT <i>W. R. ...</i>               | 2 June 65               | CODE IDENT NO. 80230                                          | SIZE C                      | DRAWING NO. 1006321 |
| APPROVED MSC <i>W. R. ...</i>               | 6-2-65                  | DATE                                                          | SCALE NONE                  | SHEET 4 OF 5        |

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|                                                                                                                                                                                                              |         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>CAPACITOR VALUES ARE IN $\mu$ f<br>RESISTOR VALUES ARE IN OHMS<br>TOLERANCES ON<br>FRACTIONS DECIMALS ANGLES<br>± ± ±<br>DO NOT SCALE THIS DRAWING |         |
| MATERIAL                                                                                                                                                                                                     |         |
| NEXT ASSY                                                                                                                                                                                                    | USED ON |
| APPLICATION                                                                                                                                                                                                  |         |





ⓓ REPLACES REV(C) WITH CHANGES

| QTY REQD                                    | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION                | FIND NO. |
|---------------------------------------------|-------------------------|--------------------------------------------|----------|
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| MIT INSTRUMENTATION LAB<br>CAMBRIDGE, MASS. |                         | MANNED SPACECRAFT CENTER<br>HOUSTON, TEXAS |          |
| DRAWN <i>J. Wong</i> DATE <i>24 May 65</i>  |                         | DUAL NOR GATE<br>(FLAT PACK)               |          |
| CHECKED <i>A. M. art</i> 6-2-65             |                         | SPECIFICATION CONTROL DRAWING              |          |
| APPROVAL <i>P. J. Hall</i> 1 Jun 65         |                         | CODE IDENT NO. SIZE NASA DRAWING NO.       |          |
| APPROVAL <i>P. J. Hall</i> 2 Jun 65         |                         | 80230 C 1006321                            |          |
| NASA APPROVAL <i>W. J. Rhee</i> 6-2-65      |                         | SCALE NONE WT SHEET 5 OF 5                 |          |
| MIT APPROVAL                                |                         |                                            |          |
| MIT APPROVAL <i>W. J. Rhee</i>              |                         |                                            |          |

|                                                                         |          |        |
|-------------------------------------------------------------------------|----------|--------|
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ON |          |        |
| DECIMALS                                                                | DECIMALS | ANGLES |
| .XX                                                                     | .XXX     | ±      |
| ±                                                                       | ±        |        |
| DO NOT SCALE DRAWING                                                    |          |        |
| MATERIAL                                                                |          |        |
| NEXT ASSY                                                               | USED ON  |        |
| APPLICATION                                                             |          |        |

MASTER

INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327