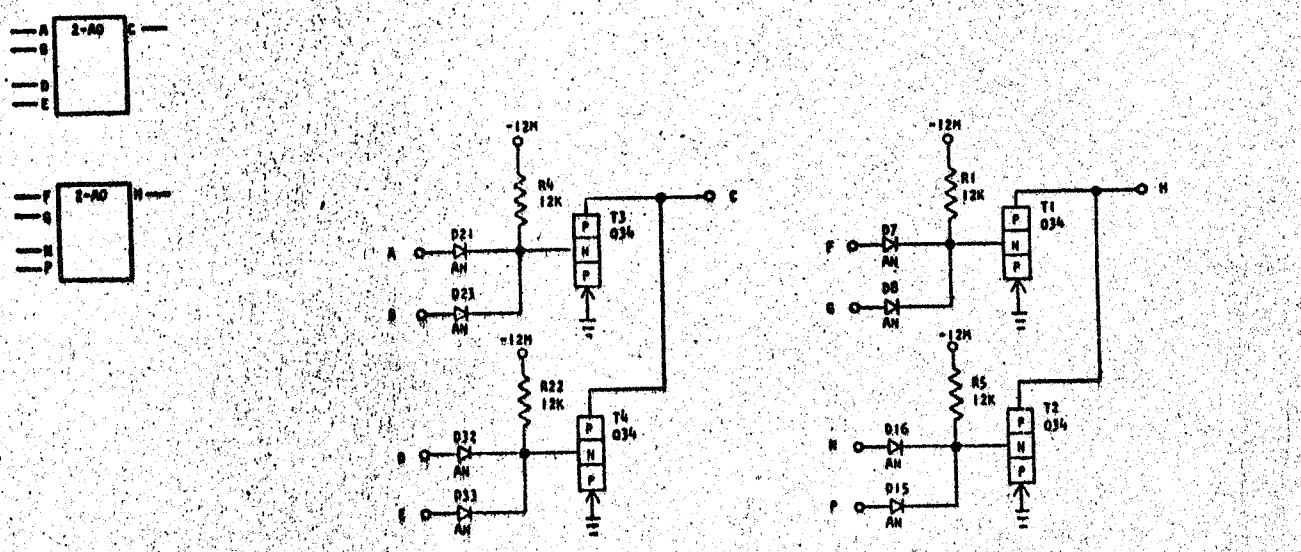
729899

| CARD CODE | 729899 |
|---|---|
| 3J MX | |

# REFERENCE DRAWING
SEE PRODUCTION DRAWING 370141

## CTDL PNP TWO WAY GATE WITHOUT COLLECTOR LOAD




SEQUENCE OF OPERATION

1. BOTH INPUTS TO A TRANSISTOR DOWN, TRANSISTOR ON OUTPUT UP
2. FOR DOWN OUTPUT, EITHER INPUT TO BOTH TRANSISTORS MUST BE UP
3. EXTERNAL LOADING OF COLLECTORS REQUIRED
4. LOGIC BLOCKS MAY HAVE SYMBOLS OTHER THAN SHOWN

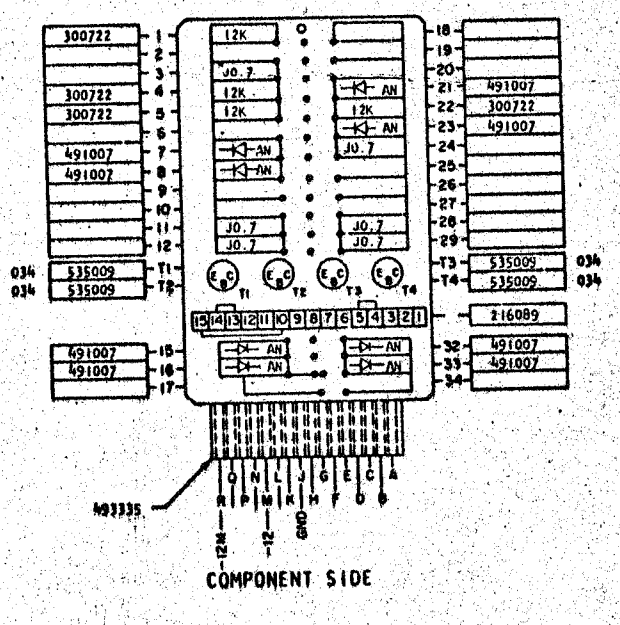
| PINS | SIGNAL NAME | | WAVE SHAPE | LEVELS | MIN | MAX |
|---|---|---|---|---|---|---|
| A,B, F,H | T | INPUT | | UP | 1.44 | 6.24 |
| | | | | DOWN | -0.74 | -6.24 |
| D,G, E,P | T | INPUT | | UP | 1.44 | 6.24 |
| | | | | DOWN | -0.74 | -6.24 |
| C,M | U | OUTPUT | | UP | -0.54 | 0.24 |
| | | | | DOWN | -7.44 | -12.5 |
| | | | | | | |

DELAY - USEC

| | MINIMUM | MAXIMUM |
|---|---|---|
| TURN ON | 0.10 | 0.80 |
| TURN OFF | 0.05 | 0.80* |

*THIS DELAY CAN OCCUR ONLY ON HEAVILY LOADED BLOCKS.

NOTE: THE ABOVE RANGES OF DELAYS ARE REPRESENTATIVE. SPECIFIC CIRCUIT APPLICATION AND/OR WIRING CAPACITANCE MAY RESULT IN DELAYS WHICH ARE OUT OF THE GIVEN RANGES. IN SUCH CASES, CARD REPLACEMENT SHOULD INDICATE IF THE CIRCUIT IS OUT OF SPECIFICATIONS. EXAMPLE: LOGIC BLOCK DRIVING EF "OR".



COMPONENT SIDE

| CIRCUIT AND PACKAGING STANDARD | |
|---|---|
| APPROVAL | DATE |
| ABC | 4-2-62 |

| INTERNATIONAL BUSINESS MACHINES CORP. | DATE | CHARGE NO. | APPROVAL | DATE | CHARGE NO. | APPROVAL | DEVELOPMENT NO. |
|---|---|---|---|---|---|---|---|
| NAME CARD ASM TSTR-CTDL PNP TWO WAY GATE WITHOUT COLLECTOR LOAD | 4-20-62 | EC 115599 | | | | | 729899 |
| DESIGN MODEL SMS | 30.4.62 | TT 83687 | | | | | |
| DRAWN RO 3-1-62 SCALE NONE | | | | | | | |
| CHECK WH 3-1-62 DRAW LTR 3-17-62 | | | | | | | |
| APPRD COPIES | | | | | | | |

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