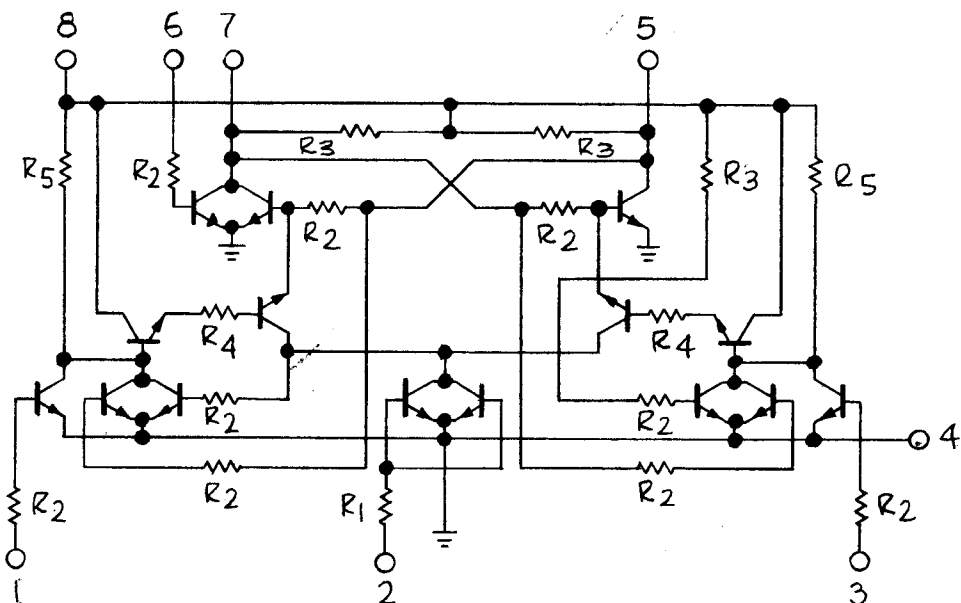


STANDARD DRAWING

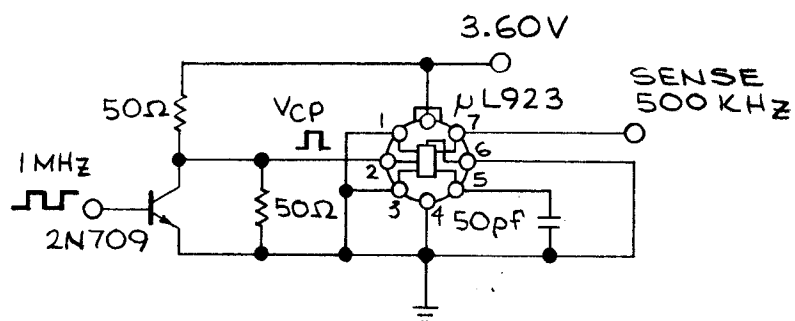
SCHMATIC DIAGRAM

TYPICAL RESISTOR VALUES

- $R_1 = 260 \Omega$
- $R_2 = 450 \Omega$
- $R_3 = 640 \Omega$
- $R_4 = 300 \Omega$
- $R_5 = 700 \Omega$

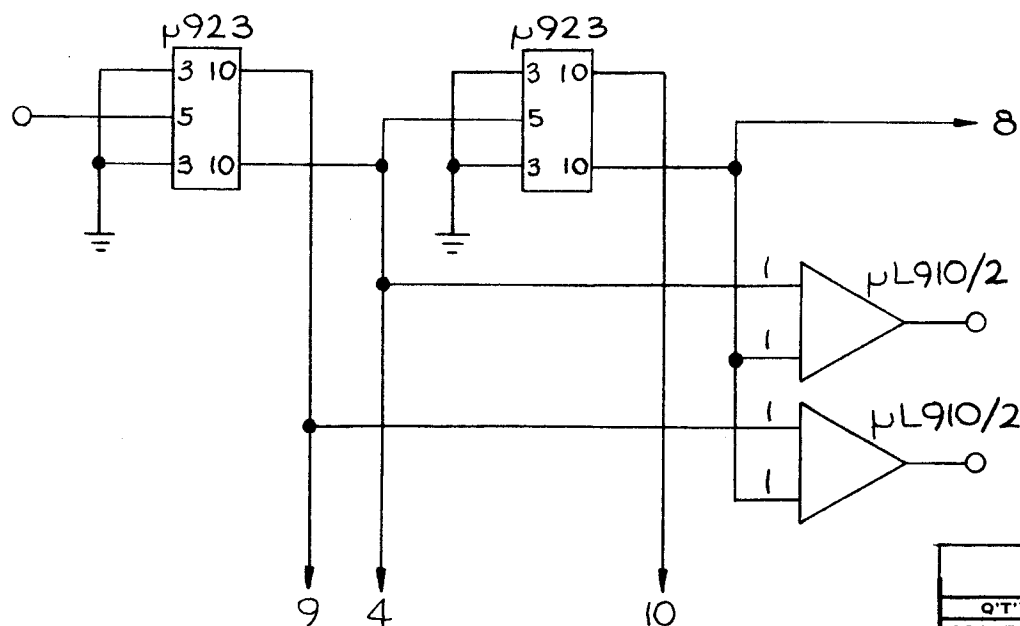


TOGGLING MODE TEST CIRCUIT



- CLOCK FREQ UP TO 2MC
- CLOCK PULSE DUTY CYCLE 35%-65%
- CAPACITIVE LOAD PER OUTPUT 50 pf

EXAMPLE USING LOW POWER μL910's TO DECODE THE μL923 OPERATED AS A COUNTER



NOTES

THE CONTENTS OF THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF THE TECHNICAL MATERIEL CORP. ITS UNAUTHORIZED USE OR REPRODUCTION IN WHOLE OR IN PART IS STRICTLY FORBIDDEN.

NW136

REVISIONS

| SYM | DESCRIPTION | DATE | E.M.N. NO. | DRAFT | CHKD | APPD |
|-----|---------------------------------|----------|------------|-------|------|------|
| Ø | ORIGINAL RELEASE FOR PRODUCTION | 12.16.66 | Ø | RME | | |

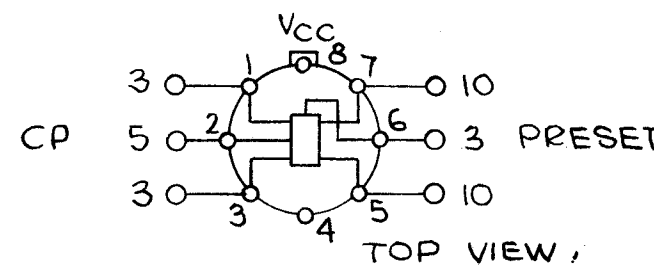
GENERAL DESCRIPTION:

THE μ L923 INDUSTRIAL FLIP-FLOP IS A FULLY INTERGRATED MONO-LITHIC CIRCUIT, USING THE EPITAXIAL PROCESS. THIS ELEMENT IS DESIGNED FOR USE IN INDUSTRIAL SHIFT REGISTER AND BINARY COUNTING APPLICATIONS. THE μ L923JK FLIP-FLOP IS COMPATIBLE WITH THE BASIC INDUSTRIAL MICROLOGIC FAMILY AND OPERATES AT A FREQ. OF 2.0 Mc MINIMUM OVER THE 15°C TO 55°C TEMPERATURE RANGE.

OPERATING VOLTAGE RANGE

| | |
|---------------------------------------|-----------------|
| COLLECTOR SUPPLY VOLTAGE (V_{CC}) | 3.6 V \pm 10% |
| OPERATING TEMPERATURE RANGE | +15°C TO +55°C |
| STORAGE TEMPERATURE RANGE | -55°C TO +125°C |

LOGIC SYMBOL & LOAD FACTORS

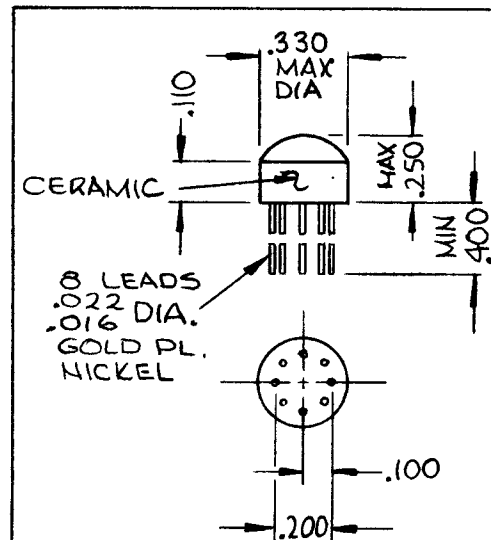


| TRUTH TABLE | | |
|-------------|-------|----------------|
| SET | CLEAR | OUTPUT |
| (1) | (3) | (7) |
| | t=n | t=n+1 |
| H | H | X ⁿ |
| H | L | H |
| L | H | L |
| L | L | X ⁿ |

H IS MORE POSITIVE THAN L
X IS THE OUTPUT STATE AT TIME n

LOADING RULES AND DRIVE FACTORS

THE MIXING OF LOW-POWER AND MEDIUM-POWER MICROLOGIC RESULTS IN THE FULL UTILIZATION OF ALL AVAILABLE DRIVE CAPABILITY FROM THE CIRCUIT. WHEN DRIVING LOW-POWER MICROLOGIC IT WILL BE NOTED THAT EACH LOW-POWER INPUT (BASE) REPRESENTS A LOADFACTOR OF 1, WHILE EACH MEDIUM-POWER MICROLOGIC INPUT REPRESENTS A LOADFACTOR OF 3. THE OUTPUT DRIVE FACTOR CAN BE USED TO DRIVE ANY COMBINATION OF INPUTS, PROVIDED THE SUM OF THE INPUT LOADS DOES NOT EXCEED THE OUTPUT DRIVE FACTOR.



| REQ'D. | ITEM | PART NUMBER | DESCRIPTION | SYMBOL |
|--|------|-------------|-------------------------------------|----------------|
| POSE LIST OF MATERIAL | | | | |
| MATERIAL | | | THE TECHNICAL MATERIEL CORP. | |
| FINISH | | | MAMARONECK, NEW YORK | |
| | | | NETWORK, FLIP-FLOP | |
| UNLESS OTHERWISE SPECIFIED | | DRAWN | DATE | FINAL APPROVAL |
| DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES | | 10/17/66 | 12/2/66 | 12/15/66 |
| DECIMALS | | CHECKED | DATE | |
| .X \pm .05 | | 12/2/66 | 12/15/66 | |
| .XX \pm .01 | | ELECT. DES. | DATE | |
| .XXX \pm .005 | | MECH. DES. | DATE | |
| FRACTIONS | | NW136 | | Ø |
| TOLERANCES | | SHEET | | REV. LTR. |
| ± 1/64 | | | | |
| ANGLES | | | | |
| ± 0° 30' | | | | |