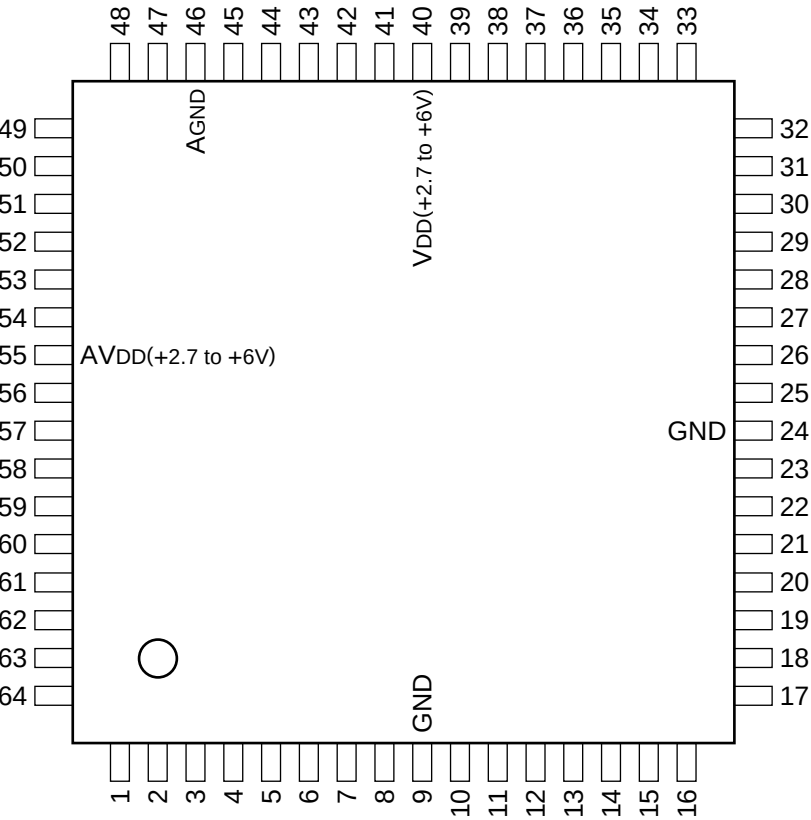


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C-MOS 8-BIT SINGLE CHIP MICROCOMPUTER WITH ONE TIME PROM  
—TOP VIEW—



(AVDD, VDD = +2.7 to +6V)

| PIN NO. | I/O | SIGNAL  | PIN NO. | I/O | SIGNAL  | PIN NO. | I/O | SIGNAL        | PIN NO. | I/O | SIGNAL      |
|---------|-----|---------|---------|-----|---------|---------|-----|---------------|---------|-----|-------------|
| 1       | I/O | P30/TO0 | 17      | I/O | P47/AD7 | 33      | I/O | P66/WAIT      | 49      | I   | P12/ANI2    |
| 2       | I/O | P31/TO1 | 18      | I/O | P50/A8  | 34      | I/O | P67/ASTB      | 50      | I   | P13/ANI3    |
| 3       | I/O | P32/TO2 | 19      | I/O | P51/A9  | 35      | I   | RESET         | 51      | I   | P14/ANI4    |
| 4       | I/O | P33/TI1 | 20      | I/O | P52/A10 | 36      | I   | P00/INTP0/TI0 | 52      | I   | P15/ANI5    |
| 5       | I/O | P34/TI2 | 21      | I/O | P53/A11 | 37      | I/O | P01/INTP1     | 53      | I   | P16/ANI6    |
| 6       | I/O | P35/PCL | 22      | I/O | P54/A12 | 38      | I/O | P02/INTP2     | 54      | I   | P17/ANI7    |
| 7       | I/O | P36/BUZ | 23      | I/O | P55/A13 | 39      | I/O | P03/INTP3     | 55      | —   | AVDD        |
| 8       | I/O | P37     | 24      | I/O | GND     | 40      | —   | VDD           | 56      | —   | AVREF       |
| 9       | —   | GND     | 25      | I/O | P56/A14 | 41      | O   | X2            | 57      | I/O | P20/SI1     |
| 10      | I/O | P40/AD0 | 26      | I/O | P57/A15 | 42      | I   | X1            | 58      | I/O | P21/SO1     |
| 11      | I/O | P41/AD1 | 27      | I/O | P60     | 43      | —   | VPP           | 59      | I/O | P22/SCK1    |
| 12      | I/O | P42/AD2 | 28      | I/O | P61     | 44      | —   | XT2           | 60      | I/O | P23/STB     |
| 13      | I/O | P43/AD3 | 29      | I/O | P62     | 45      | I   | P04/XT1       | 61      | I/O | P24/BUSY    |
| 14      | I/O | P44/AD4 | 30      | I/O | P63     | 46      | —   | AGND          | 62      | I/O | P25/SI0/SB0 |
| 15      | I/O | P45/AD5 | 31      | I/O | P64/RD  | 47      | I   | P10/ANI0      | 63      | I/O | P26/SO0/SB1 |
| 16      | I/O | P46/AD6 | 32      | I/O | P65/WR  | 48      | I   | P11/ANI1      | 64      | I/O | P27/SCK0    |

|    |               |          |    |
|----|---------------|----------|----|
|    |               | P30/TO0  | 1  |
| 35 | RESET         | P31/TO1  | 2  |
|    |               | P32/TO2  | 3  |
| 41 | X2            | P33/TI1  | 4  |
| 42 | X1            | P34/TI2  | 5  |
|    |               | P35/PCL  | 6  |
|    |               | P36/BUZ  | 7  |
| 44 | XT2           | P37      | 8  |
|    |               |          |    |
| 36 | P00/INTP1/TI0 | P40/AD0  | 10 |
| 37 | P01/INTP1     | P41/AD1  | 11 |
| 38 | P02/INTP2     | P42/AD2  | 12 |
| 39 | P03/INTP3     | P43/AD3  | 13 |
| 45 | P04/XT1       | P44/AD4  | 14 |
|    |               | P45/AD5  | 15 |
|    |               | P46/AD6  | 16 |
| 56 | AVREF         | P47/AD7  | 17 |
|    |               |          |    |
| 47 | P10/ANI0      | P50/A8   | 18 |
| 48 | P11/ANI1      | P51/A9   | 19 |
| 49 | P12/ANI2      | P52/A10  | 20 |
| 50 | P13/ANI3      | P53/A11  | 21 |
| 51 | P14/ANI4      | P54/A12  | 22 |
| 52 | P15/ANI5      | P55/A13  | 23 |
| 53 | P16/ANI6      | P56/A14  | 25 |
| 54 | P17/ANI7      | P57/A15  | 26 |
|    |               |          |    |
| 57 | P20/SI1       | P60      | 27 |
| 58 | P21/SO1       | P61      | 28 |
| 59 | P22/SCK1      | P62      | 29 |
| 60 | P23/STB       | P63      | 30 |
| 61 | P24/BUSY      | P64/RD   | 31 |
| 62 | P25/SI0/SB0   | P65/WR   | 32 |
| 63 | P26/SO0/SB1   | P66/WAIT | 33 |
| 64 | P27/SCK0      | P67/ASTB | 34 |

## INPUT

|               |                               |
|---------------|-------------------------------|
| ANI0 - ANI7   | ; ANALOG                      |
| AVREF         | ; ANALOG REFERENCE VOLTAGE    |
| BUSY          | ; BUSY                        |
| INTP0 - INTP3 | ; INTERRUPT FROM PERIPHERALS  |
| P00, P04      | ; PORT0                       |
| P10 - P17     | ; PORT1                       |
| RESET         | ; RESET                       |
| SI0, SI1      | ; SERIAL                      |
| TI0 - TI2     | ; TIMER                       |
| WAIT          | ; WAIT                        |
| X1, X2        | ; CRYSTAL (MAIN SYSTEM CLOCK) |
| XT1, XT2      | ; CRYSTAL (SUB SYSTEM CLOCK)  |

## OUTPUT

|           |                      |
|-----------|----------------------|
| A8 - A15  | ; ADDRESS BUS        |
| ASTB      | ; ADDRESS STROBE     |
| BUZ       | ; BUZZER CLOCK       |
| PCL       | ; PROGRAMMABLE CLOCK |
| RD        | ; READ STROBE        |
| SO0, SO1  | ; SERIAL             |
| STB       | ; STROBE             |
| TO0 - TO2 | ; TIMER              |
| WR        | ; WRITE STROBE       |

## INPUT/OUTPUT

|            |                    |
|------------|--------------------|
| AD0 - AD7  | ; ADDRESS/DATA BUS |
| P01 - P03  | ; PORT0            |
| P20 - P27  | ; PORT2            |
| P30 - P37  | ; PORT3            |
| P40 - P47  | ; PORT4            |
| P50 - P57  | ; PORT5            |
| P60 - P67  | ; PORT6            |
| SB0, SB1   | ; SERIAL BUS       |
| SCK0, SCK1 | ; SERIAL CLOCK     |

