

January 1993

CMOS AND Gate

## Features

- High-Voltage Types (20V Rating)
- CD4073BMS Triple 3-Input AND Gate
- CD4081BMS Quad 2-Input AND Gate
- CD4082BMS Dual 4-Input AND Gate
- Medium Speed Operation:
  - $t_{PLH}$ ,  $t_{PHL}$  = 60ns (typ) at  $V_{DD}$  = 10V
- 100% Tested for Quiescent Current at 20V
- Maximum Input Current of  $1\mu A$  at 18V Over Full Package Temperature Range; 100nA at 18V and +25°C
- Noise Margin (Over Full Package Temperature Range):
  - 1V at  $V_{DD}$  = 5V
  - 2V at  $V_{DD}$  = 10V
  - 2.5V at  $V_{DD}$  = 15V
- Standardized Symmetrical Output Characteristics
- 5V, 10V and 15V Parametric Ratings
- Meets All Requirements of JEDEC Tentative Standard No. 13B, "Standard Specifications for Description of 'B' Series CMOS Devices"

## Description

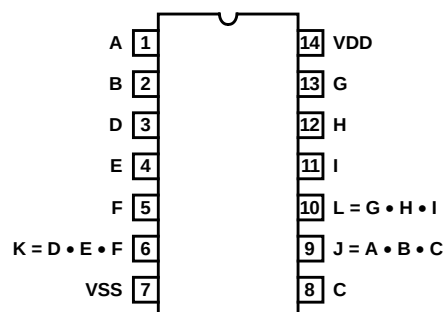
CD4073BMS, CD4081BMS and CD4082BMS AND gates provide the system designer with direct implementation of the AND function and supplement the existing family of CMOS gates.

The CD4073BMS, CD4081BMS and CD4082BMS are supplied in these 14 lead outline packages:

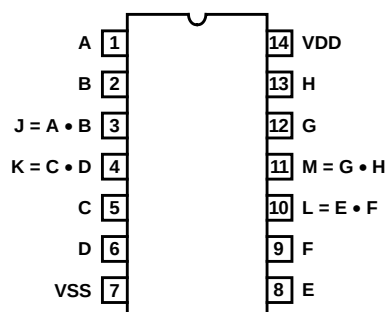
|                   |          |      |
|-------------------|----------|------|
| Braze Seal DIP    | *H4Q     | †H4H |
| Frit Seal DIP     | *H1B     |      |
| Ceramic Flatpack  | *H3W     |      |
| *CD4073B, CD4081B | †CD4082B |      |

## Pinout

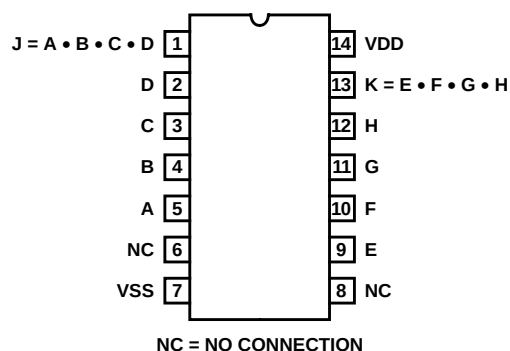
CD4073BMS  
TOP VIEW



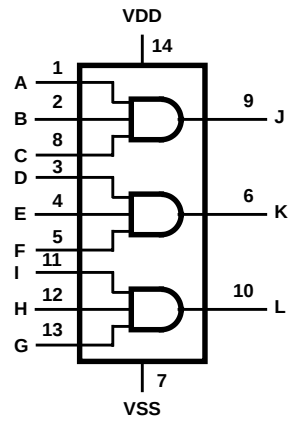
CD4081BMS  
TOP VIEW



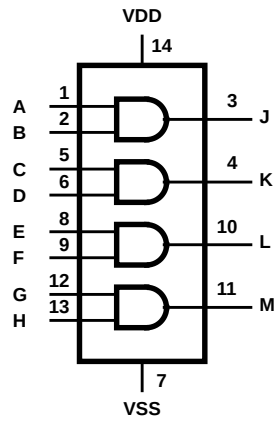
CD4082BMS  
TOP VIEW



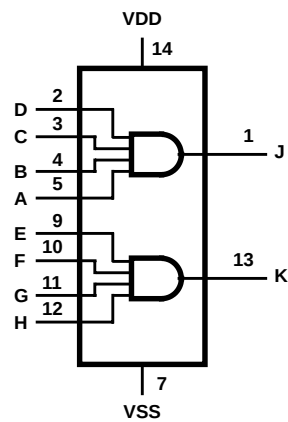
**Functional Diagram**



CD4073BMS



CD4081BMS



CD4082BMS

# Specifications CD4073BMS, CD4081BMS, CD4082BMS

## Absolute Maximum Ratings

DC Supply Voltage Range, (VDD) ..... -0.5V to +20V  
(Voltage Referenced to VSS Terminals)  
Input Voltage Range, All Inputs ..... -0.5V to VDD +0.5V  
DC Input Current, Any One Input .....  $\pm 10\mu\text{A}$   
Operating Temperature Range ..... -55°C to +125°C  
Package Types D, F, K, H  
Storage Temperature Range (TSTG) ..... -65°C to +150°C  
Lead Temperature (During Soldering) ..... +265°C  
At Distance 1/16  $\pm$  1/32 Inch (1.59mm  $\pm$  0.79mm) from case for  
10s Maximum

## Reliability Information

Thermal Resistance .....  $\theta_{ja}$   $\theta_{jc}$   
Ceramic DIP and FRIT Package ..... 80°C/W 20°C/W  
Flatpack Package ..... 70°C/W 20°C/W  
Maximum Package Power Dissipation (PD) at +125°C  
For TA = -55°C to +100°C (Package Type D, F, K) ..... 500mW  
For TA = +100°C to +125°C (Package Type D, F, K) ..... Derate  
Linearity at 12mW/°C to 200mW  
Device Dissipation per Output Transistor ..... 100mW  
For TA = Full Package Temperature Range (All Package Types)  
Junction Temperature ..... +175°C

**TABLE 1. DC ELECTRICAL PERFORMANCE CHARACTERISTICS**

| PARAMETER                      | SYMBOL | CONDITIONS (NOTE 1)                   |           | GROUP A<br>SUBGROUPS | TEMPERATURE          | LIMITS         |                | UNITS         |
|--------------------------------|--------|---------------------------------------|-----------|----------------------|----------------------|----------------|----------------|---------------|
|                                |        |                                       |           |                      |                      | MIN            | MAX            |               |
| Supply Current                 | IDD    | VDD = 20V, VIN = VDD or GND           |           | 1                    | +25°C                | -              | .5             | $\mu\text{A}$ |
|                                |        |                                       |           | 2                    | +125°C               | -              | 50             | $\mu\text{A}$ |
|                                |        | VDD = 18V, VIN = VDD or GND           |           | 3                    | -55°C                | -              | .5             | $\mu\text{A}$ |
| Input Leakage Current          | IIL    | VIN = VDD or GND                      | VDD = 20  | 1                    | +25°C                | -100           | -              | nA            |
|                                |        |                                       |           | 2                    | +125°C               | -1000          | -              | nA            |
|                                |        |                                       | VDD = 18V | 3                    | -55°C                | -100           | -              | nA            |
| Input Leakage Current          | IIH    | VIN = VDD or GND                      | VDD = 20  | 1                    | +25°C                | -              | 100            | nA            |
|                                |        |                                       |           | 2                    | +125°C               | -              | 1000           | nA            |
|                                |        |                                       | VDD = 18V | 3                    | -55°C                | -              | 100            | nA            |
| Output Voltage                 | VOL15  | VDD = 15V, No Load                    |           | 1, 2, 3              | +25°C, +125°C, -55°C | -              | 50             | mV            |
| Output Voltage                 | VOH15  | VDD = 15V, No Load (Note 3)           |           | 1, 2, 3              | +25°C, +125°C, -55°C | 14.95          | -              | V             |
| Output Current (Sink)          | IOL5   | VDD = 5V, VOUT = 0.4V                 |           | 1                    | +25°C                | 0.53           | -              | mA            |
| Output Current (Sink)          | IOL10  | VDD = 10V, VOUT = 0.5V                |           | 1                    | +25°C                | 1.4            | -              | mA            |
| Output Current (Sink)          | IOL15  | VDD = 15V, VOUT = 1.5V                |           | 1                    | +25°C                | 3.5            | -              | mA            |
| Output Current (Source)        | IOH5A  | VDD = 5V, VOUT = 4.6V                 |           | 1                    | +25°C                | -              | -0.53          | mA            |
| Output Current (Source)        | IOH5B  | VDD = 5V, VOUT = 2.5V                 |           | 1                    | +25°C                | -              | -1.8           | mA            |
| Output Current (Source)        | IOH10  | VDD = 10V, VOUT = 9.5V                |           | 1                    | +25°C                | -              | -1.4           | mA            |
| Output Current (Source)        | IOH15  | VDD = 15V, VOUT = 13.5V               |           | 1                    | +25°C                | -              | -3.5           | mA            |
| N Threshold Voltage            | VNTH   | VDD = 10V, ISS = -10 $\mu\text{A}$    |           | 1                    | +25°C                | -2.8           | -0.7           | V             |
| P Threshold Voltage            | VPTH   | VSS = 0V, IDD = 10 $\mu\text{A}$      |           | 1                    | +25°C                | 0.7            | 2.8            | V             |
| Functional                     | F      | VDD = 2.8V, VIN = VDD or GND          |           | 7                    | +25°C                | VOH ><br>VDD/2 | VOL <<br>VDD/2 | V             |
|                                |        | VDD = 20V, VIN = VDD or GND           |           | 7                    | +25°C                |                |                |               |
|                                |        | VDD = 18V, VIN = VDD or GND           |           | 8A                   | +125°C               |                |                |               |
|                                |        | VDD = 3V, VIN = VDD or GND            |           | 8B                   | -55°C                |                |                |               |
| Input Voltage Low<br>(Note 2)  | VIL    | VDD = 5V, VOH > 4.5V, VOL < 0.5V      |           | 1, 2, 3              | +25°C, +125°C, -55°C | -              | 1.5            | V             |
| Input Voltage High<br>(Note 2) | VIH    | VDD = 5V, VOH > 4.5V, VOL < 0.5V      |           | 1, 2, 3              | +25°C, +125°C, -55°C | 3.5            | -              | V             |
| Input Voltage Low<br>(Note 2)  | VIL    | VDD = 15V, VOH > 13.5V,<br>VOL < 1.5V |           | 1, 2, 3              | +25°C, +125°C, -55°C | -              | 4              | V             |
| Input Voltage High<br>(Note 2) | VIH    | VDD = 15V, VOH > 13.5V,<br>VOL < 1.5V |           | 1, 2, 3              | +25°C, +125°C, -55°C | 11             | -              | V             |

NOTES: 1. All voltages referenced to device GND, 100% testing being implemented. 3. For accuracy, voltage is measured differentially to VDD. Limit is 0.050V max.  
2. Go/No Go test with limits applied to inputs.

## Specifications CD4073BMS, CD4081BMS, CD4082BMS

**TABLE 2. AC ELECTRICAL PERFORMANCE CHARACTERISTICS**

| PARAMETER         | SYMBOL       | CONDITIONS (NOTES 1, 2)    | GROUP A<br>SUBGROUPS | TEMPERATURE   | LIMITS |     | UNITS |
|-------------------|--------------|----------------------------|----------------------|---------------|--------|-----|-------|
|                   |              |                            |                      |               | MIN    | MAX |       |
| Propagation Delay | TPHL<br>TPLH | VDD = 5V, VIN = VDD or GND | 9                    | +25°C         | -      | 250 | ns    |
|                   |              |                            | 10, 11               | +125°C, -55°C | -      | 338 | ns    |
| Transition Time   | TTHL<br>TTLH | VDD = 5V, VIN = VDD or GND | 9                    | +25°C         | -      | 200 | ns    |
|                   |              |                            | 10, 11               | +125°C, -55°C | -      | 270 | ns    |

NOTES:

1. CL = 50pF, RL = 200K, Input TR, TF < 20ns.
2. -55°C and +125°C limits guaranteed, 100% testing being implemented.

**TABLE 3. ELECTRICAL PERFORMANCE CHARACTERISTICS**

| PARAMETER               | SYMBOL       | CONDITIONS                    | NOTES   | TEMPERATURE             | LIMITS |       | UNITS |
|-------------------------|--------------|-------------------------------|---------|-------------------------|--------|-------|-------|
|                         |              |                               |         |                         | MIN    | MAX   |       |
| Supply Current          | IDD          | VDD = 5V, VIN = VDD or GND    | 1, 2    | -55°C, +25°C            | -      | .25   | μA    |
|                         |              |                               |         | +125°C                  | -      | 7.5   | μA    |
|                         |              | VDD = 10V, VIN = VDD or GND   | 1, 2    | -55°C, +25°C            | -      | .5    | μA    |
|                         |              |                               |         | +125°C                  | -      | 15    | μA    |
|                         |              | VDD = 15V, VIN = VDD or GND   | 1, 2    | -55°C, +25°C            | -      | .5    | μA    |
|                         |              |                               |         | +125°C                  | -      | 30    | μA    |
| Output Voltage          | VOL          | VDD = 5V, No Load             | 1, 2    | +25°C, +125°C,<br>-55°C | -      | 50    | mV    |
| Output Voltage          | VOL          | VDD = 10V, No Load            | 1, 2    | +25°C, +125°C,<br>-55°C | -      | 50    | mV    |
| Output Voltage          | VOH          | VDD = 5V, No Load             | 1, 2    | +25°C, +125°C,<br>-55°C | 4.95   | -     | V     |
| Output Voltage          | VOH          | VDD = 10V, No Load            | 1, 2    | +25°C, +125°C,<br>-55°C | 9.95   | -     | V     |
| Output Current (Sink)   | IOL5         | VDD = 5V, VOUT = 0.4V         | 1, 2    | +125°C                  | 0.36   | -     | mA    |
|                         |              |                               |         | -55°C                   | 0.64   | -     | mA    |
| Output Current (Sink)   | IOL10        | VDD = 10V, VOUT = 0.5V        | 1, 2    | +125°C                  | 0.9    | -     | mA    |
|                         |              |                               |         | -55°C                   | 1.6    | -     | mA    |
| Output Current (Sink)   | IOL15        | VDD = 15V, VOUT = 1.5V        | 1, 2    | +125°C                  | 2.4    | -     | mA    |
|                         |              |                               |         | -55°C                   | 4.2    | -     | mA    |
| Output Current (Source) | IOH5A        | VDD = 5V, VOUT = 4.6V         | 1, 2    | +125°C                  | -      | -0.36 | mA    |
|                         |              |                               |         | -55°C                   | -      | -0.64 | mA    |
| Output Current (Source) | IOH5B        | VDD = 5V, VOUT = 2.5V         | 1, 2    | +125°C                  | -      | -1.15 | mA    |
|                         |              |                               |         | -55°C                   | -      | -2.0  | mA    |
| Output Current (Source) | IOH10        | VDD = 10V, VOUT = 9.5V        | 1, 2    | +125°C                  | -      | -0.9  | mA    |
|                         |              |                               |         | -55°C                   | -      | -2.6  | mA    |
| Output Current (Source) | IOH15        | VDD = 15V, VOUT = 13.5V       | 1, 2    | +125°C                  | -      | -2.4  | mA    |
|                         |              |                               |         | -55°C                   | -      | -4.2  | mA    |
| Input Voltage Low       | VIL          | VDD = 10V, VOH > 9V, VOL < 1V | 1, 2    | +25°C, +125°C,<br>-55°C | -      | 3     | V     |
| Input Voltage High      | VIH          | VDD = 10V, VOH > 9V, VOL < 1V | 1, 2    | +25°C, +125°C,<br>-55°C | 7      | -     | V     |
| Propagation Delay       | TPHL<br>TPLH | VDD = 10V                     | 1, 2, 3 | +25°C                   | -      | 120   | ns    |
|                         |              | VDD = 15V                     | 1, 2, 3 | +25°C                   | -      | 90    | ns    |

## Specifications CD4073BMS, CD4081BMS, CD4082BMS

**TABLE 3. ELECTRICAL PERFORMANCE CHARACTERISTICS (Continued)**

| PARAMETER         | SYMBOL       | CONDITIONS | NOTES   | TEMPERATURE | LIMITS |     | UNITS |
|-------------------|--------------|------------|---------|-------------|--------|-----|-------|
|                   |              |            |         |             | MIN    | MAX |       |
| Transition Time   | TTHL<br>TTLH | VDD = 10V  | 1, 2, 3 | +25°C       | -      | 100 | ns    |
|                   |              | VDD = 15V  | 1, 2, 3 | +25°C       | -      | 80  | ns    |
| Input Capacitance | CIN          | Any Input  | 1, 2    | +25°C       | -      | 7.5 | pF    |

NOTES:

1. All voltages referenced to device GND.
2. The parameters listed on Table 3 are controlled via design or process and are not directly tested. These parameters are characterized on initial design release and upon design changes which would affect these characteristics.
3. CL = 50pF, RL = 200K, Input TR, TF < 20ns.

**TABLE 4. POST IRRADIATION ELECTRICAL PERFORMANCE CHARACTERISTICS**

| PARAMETER                 | SYMBOL       | CONDITIONS                  | NOTES      | TEMPERATURE | LIMITS      |                    | UNITS |
|---------------------------|--------------|-----------------------------|------------|-------------|-------------|--------------------|-------|
|                           |              |                             |            |             | MIN         | MAX                |       |
| Supply Current            | IDD          | VDD = 20V, VIN = VDD or GND | 1, 4       | +25°C       | -           | 2.5                | μA    |
| N Threshold Voltage       | VNTH         | VDD = 10V, ISS = -10μA      | 1, 4       | +25°C       | -2.8        | -0.2               | V     |
| N Threshold Voltage Delta | ΔVTN         | VDD = 10V, ISS = -10μA      | 1, 4       | +25°C       | -           | ±1                 | V     |
| P Threshold Voltage       | VTP          | VSS = 0V, IDD = 10μA        | 1, 4       | +25°C       | 0.2         | 2.8                | V     |
| P Threshold Voltage Delta | ΔVTP         | VSS = 0V, IDD = 10μA        | 1, 4       | +25°C       | -           | ±1                 | V     |
| Functional                | F            | VDD = 18V, VIN = VDD or GND | 1          | +25°C       | VOH > VDD/2 | VOL < VDD/2        | V     |
|                           |              | VDD = 3V, VIN = VDD or GND  |            |             |             |                    |       |
| Propagation Delay Time    | TPHL<br>TPLH | VDD = 5V                    | 1, 2, 3, 4 | +25°C       | -           | 1.35 x +25°C Limit | ns    |

NOTES: 1. All voltages referenced to device GND.

2. CL = 50pF, RL = 200K, Input TR, TF < 20ns.

3. See Table 2 for +25°C limit.

4. Read and Record

**TABLE 5. BURN-IN AND LIFE TEST DELTA PARAMETERS +25°C**

| PARAMETER               | SYMBOL | DELTA LIMIT              |
|-------------------------|--------|--------------------------|
| Supply Current - SSI    | IDD    | ±0.1μA                   |
| Output Current (Sink)   | IOL5   | ± 20% x Pre-Test Reading |
| Output Current (Source) | IOH5A  | ± 20% x Pre-Test Reading |

**TABLE 6. APPLICABLE SUBGROUPS**

| CONFORMANCE GROUP             | MIL-STD-883 METHOD | GROUP A SUBGROUPS             | READ AND RECORD  |
|-------------------------------|--------------------|-------------------------------|------------------|
| Initial Test (Pre Burn-In)    | 100% 5004          | 1, 7, 9                       | IDD, IOL5, IOH5A |
| Interim Test 1 (Post Burn-In) | 100% 5004          | 1, 7, 9                       | IDD, IOL5, IOH5A |
| Interim Test 2 (Post Burn-In) | 100% 5004          | 1, 7, 9                       | IDD, IOL5, IOH5A |
| PDA (Note 1)                  | 100% 5004          | 1, 7, 9, Deltas               |                  |
| Interim Test 3 (Post Burn-In) | 100% 5004          | 1, 7, 9                       | IDD, IOL5, IOH5A |
| PDA (Note 1)                  | 100% 5004          | 1, 7, 9, Deltas               |                  |
| Final Test                    | 100% 5004          | 2, 3, 8A, 8B, 10, 11          |                  |
| Group A                       | Sample 5005        | 1, 2, 3, 7, 8A, 8B, 9, 10, 11 |                  |

## Specifications CD4073BMS, CD4081BMS, CD4082BMS

**TABLE 6. APPLICABLE SUBGROUPS (Continued)**

| CONFORMANCE GROUP |              | MIL-STD-883 METHOD | GROUP A SUBGROUPS                     | READ AND RECORD              |
|-------------------|--------------|--------------------|---------------------------------------|------------------------------|
| Group B           | Subgroup B-5 | Sample 5005        | 1, 2, 3, 7, 8A, 8B, 9, 10, 11, Deltas | Subgroups 1, 2, 3, 9, 10, 11 |
|                   | Subgroup B-6 | Sample 5005        | 1, 7, 9                               |                              |
| Group D           |              | Sample 5005        | 1, 2, 3, 8A, 8B, 9                    | Subgroups 1, 2, 3            |

NOTE: 1. 5% Parametric, 3% Functional; Cumulative for Static 1 and 2.

**TABLE 7. TOTAL DOSE IRRADIATION**

| CONFORMANCE GROUPS | MIL-STD-883 METHOD | TEST      |            | READ AND RECORD |            |
|--------------------|--------------------|-----------|------------|-----------------|------------|
|                    |                    | PRE-IRRAD | POST-IRRAD | PRE-IRRAD       | POST-IRRAD |
| Group E Subgroup 2 | 5005               | 1, 7, 9   | Table 4    | 1, 9            | Table 4    |

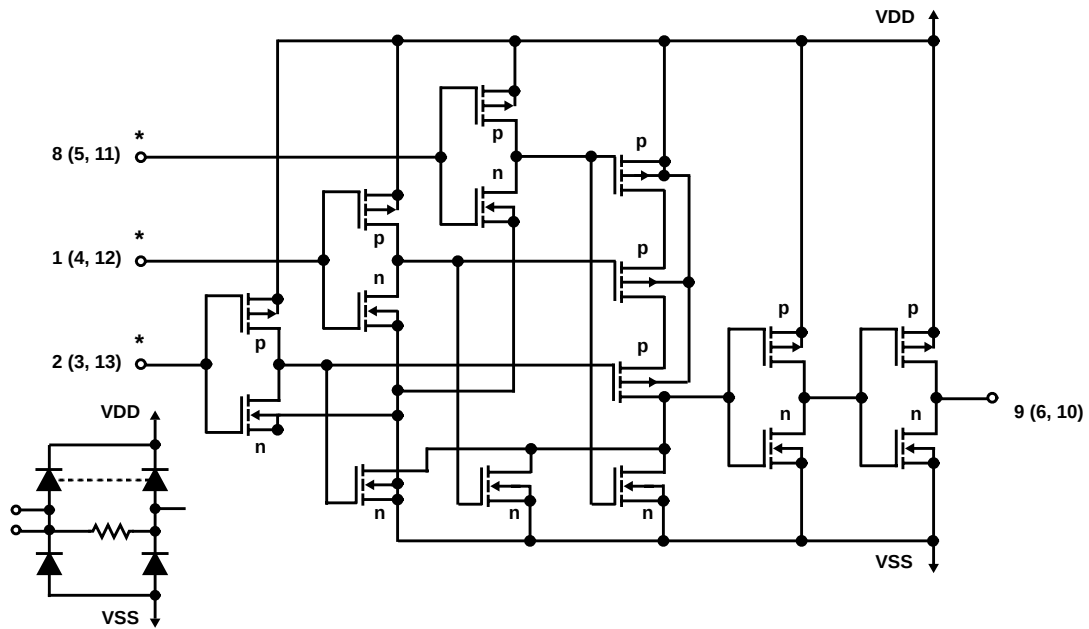
**TABLE 8. BURN-IN AND IRRADIATION TEST CONNECTIONS**

| FUNCTION                   | OPEN         | GROUND               | VDD                          | 9V ± -0.5V   | OSCILLATOR                  |       |
|----------------------------|--------------|----------------------|------------------------------|--------------|-----------------------------|-------|
|                            |              |                      |                              |              | 50kHz                       | 25kHz |
| PART NUMBER CD4073BMS      |              |                      |                              |              |                             |       |
| Static Burn-In 1<br>Note 1 | 6, 9, 10     | 1 - 5, 7, 8, 11 - 13 | 14                           |              |                             |       |
| Static Burn-In 2<br>Note 1 | 6, 9, 10     | 7                    | 1 - 5, 8, 11 - 14            |              |                             |       |
| Dynamic Burn-In<br>Note 1  | -            | 7                    | 14                           | 6, 9, 10     | 1, 5, 8, 11 - 13            |       |
| Irradiation<br>Note 2      | 6, 9, 10     | 7                    | 1 - 5, 8, 11 - 14            |              |                             |       |
| PART NUMBER CD4081BMS      |              |                      |                              |              |                             |       |
| Static Burn-In 1<br>Note 1 | 3, 4, 10, 11 | 1, 2, 5 - 9, 12, 13  | 14                           |              |                             |       |
| Static Burn-In 2<br>Note 1 | 3, 4, 10, 11 | 7                    | 1, 2, 5, 6, 8, 9,<br>12 - 14 |              |                             |       |
| Dynamic Burn-In<br>Note 1  | -            | 7                    | 14                           | 3, 4, 10, 11 | 1, 2, 5, 6, 8, 9, 12,<br>13 |       |
| Irradiation<br>Note 2      | 3, 4, 10, 11 | 7                    | 1, 2, 5, 6, 8, 9,<br>12 - 14 |              |                             |       |
| PART NUMBER CD4082BMS      |              |                      |                              |              |                             |       |
| Static Burn-In 1<br>Note 1 | 1, 6, 8, 13  | 2 - 5, 7, 9 - 12     | 14                           |              |                             |       |
| Static Burn-In 2<br>Note 1 | 1, 6, 8, 13  | 7                    | 2 - 5, 9 - 12, 14            |              |                             |       |
| Dynamic Burn-In<br>Note 1  | 6, 8         | 7                    | 14                           | 1, 3         | 2 - 5, 9 - 12               |       |
| Irradiation<br>Note 2      | 1, 6, 8, 13  | 7                    | 2 - 5, 9 - 12, 14            |              |                             |       |

NOTE:

- Each pin except VDD and GND will have a series resistor of  $10K \pm 5\%$ ,  $VDD = 18V \pm 0.5V$
- Each pin except VDD and GND will have a series resistor of  $47K \pm 5\%$ ; Group E, Subgroup 2, sample size is 4 dice/wafer, 0 failures,  $VDD = 10V \pm 0.5V$

# CD4073BMS, CD4081BMS, CD4082BMS



ALL INPUTS PROTECTED BY  
CMOS PROTECTION NETWORK

FIGURE 1. SCHEMATIC DIAGRAM FOR CD4073BMS (1 OF 3 IDENTICAL GATES)

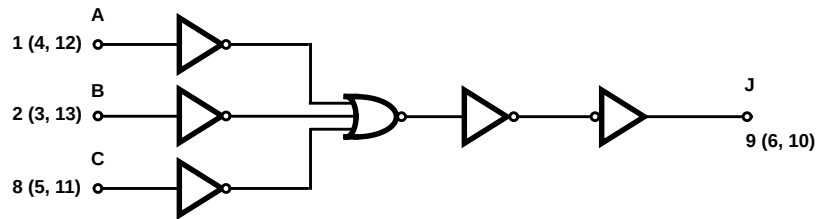
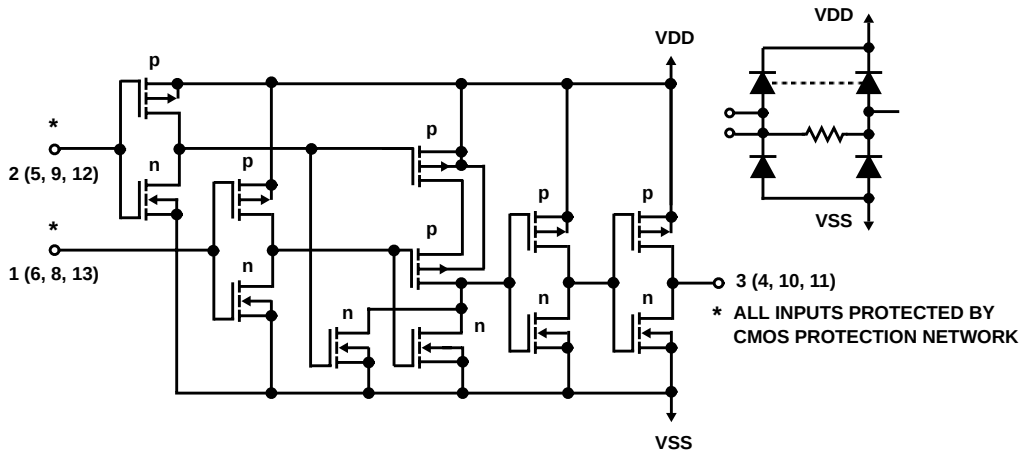


FIGURE 2. LOGIC DIAGRAM FOR CD4073BMS (1 OF 3 IDENTICAL GATES)



\* ALL INPUTS PROTECTED BY  
CMOS PROTECTION NETWORK

FIGURE 3. SCHEMATIC DIAGRAM FOR CD4081BMS (1 OF 4 IDENTICAL GATES)

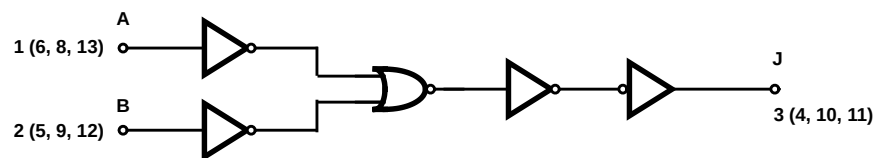


FIGURE 4. LOGIC DIAGRAM FOR CD4081BMS (1 OF 4 IDENTICAL GATES)

## CD4073BMS, CD4081BMS, CD4082BMS

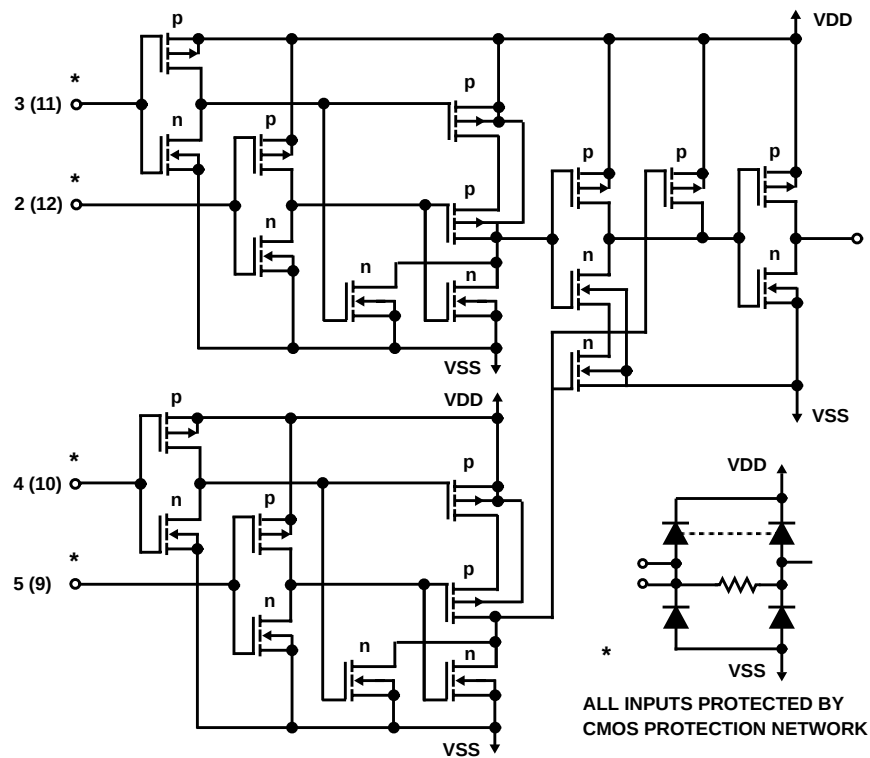


FIGURE 5. SCHEMATIC DIAGRAM FOR CD4082BMS (1 OF 2 IDENTICAL GATES)

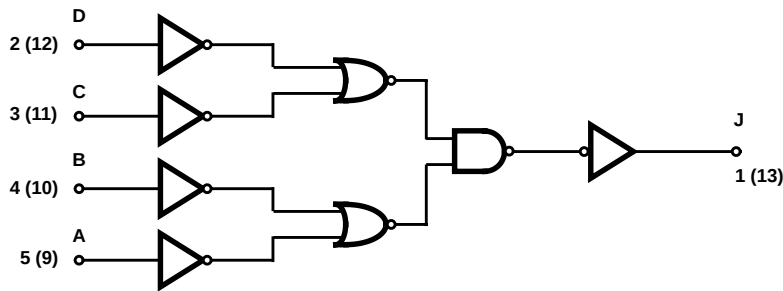


FIGURE 6. LOGIC DIAGRAM FOR CD4082BMS (1 OF 2 IDENTICAL GATES)

### Typical Performance Characteristics

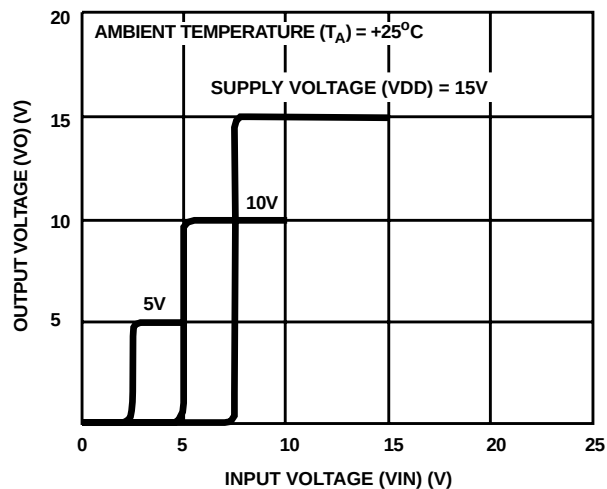


FIGURE 7. TYPICAL VOLTAGE TRANSFER CHARACTERISTICS

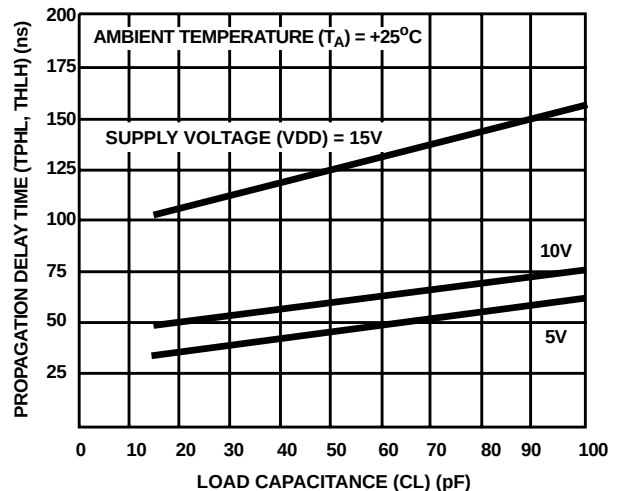


FIGURE 8. TYPICAL PROPAGATION DELAY TIME AS A FUNCTION OF LOAD CAPACITANCE



Typical Performance Characteristics (Continued)

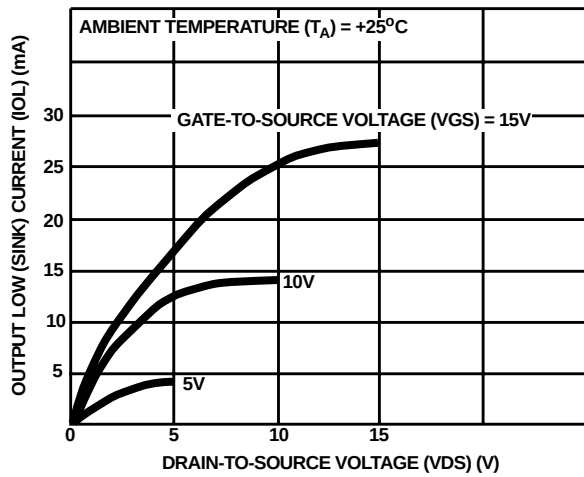


FIGURE 9. TYPICAL OUTPUT LOW (SINK) CURRENT CHARACTERISTICS

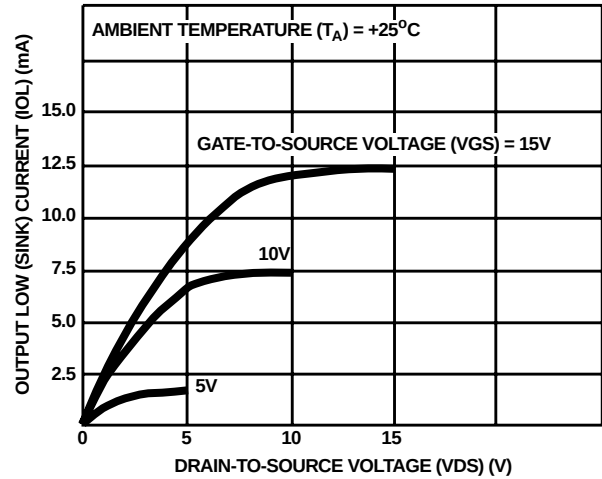


FIGURE 10. MINIMUM OUTPUT LOW (SINK) CURRENT CHARACTERISTICS

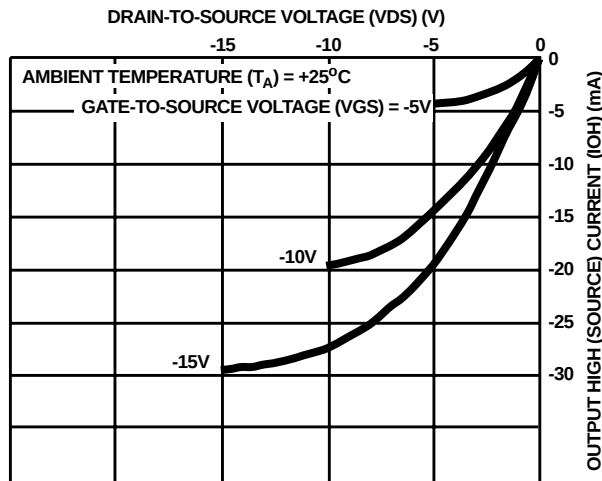


FIGURE 11. TYPICAL OUTPUT HIGH (SOURCE) CURRENT CHARACTERISTICS

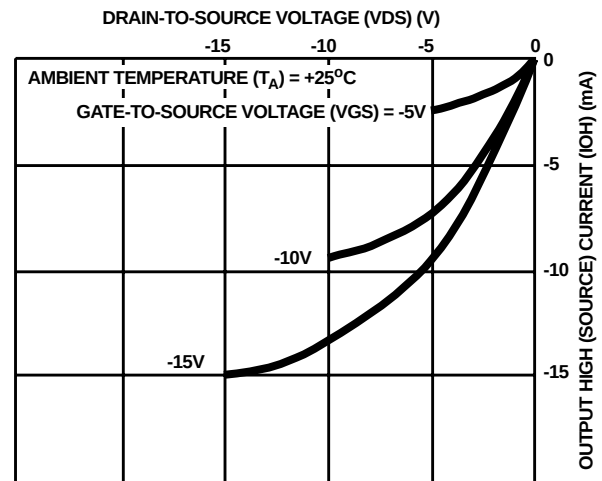


FIGURE 12. MINIMUM OUTPUT HIGH (SOURCE) CURRENT CHARACTERISTICS

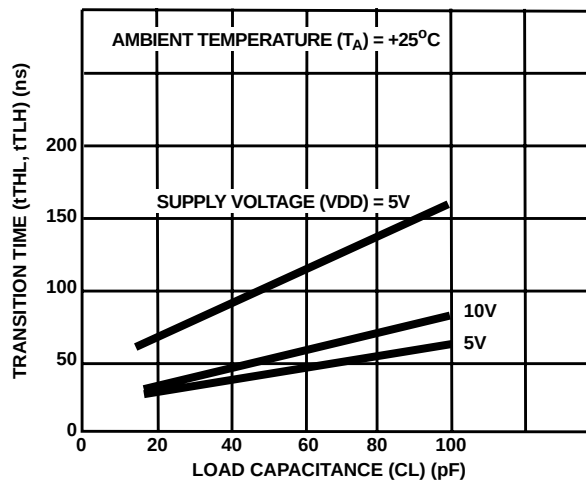


FIGURE 13. TYPICAL TRANSITION TIME AS A FUNCTION OF LOAD CAPACITANCE

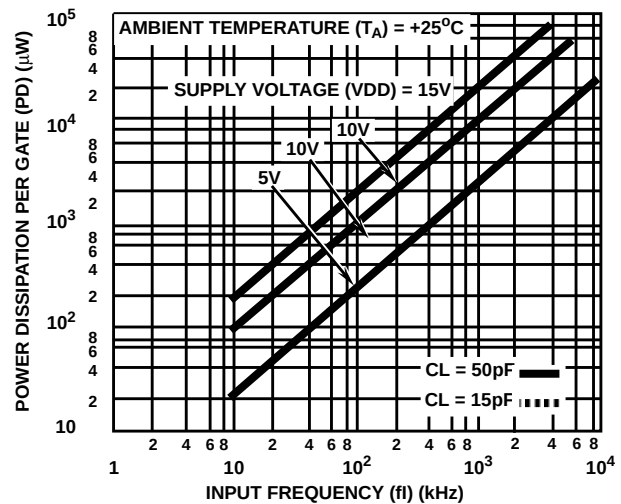
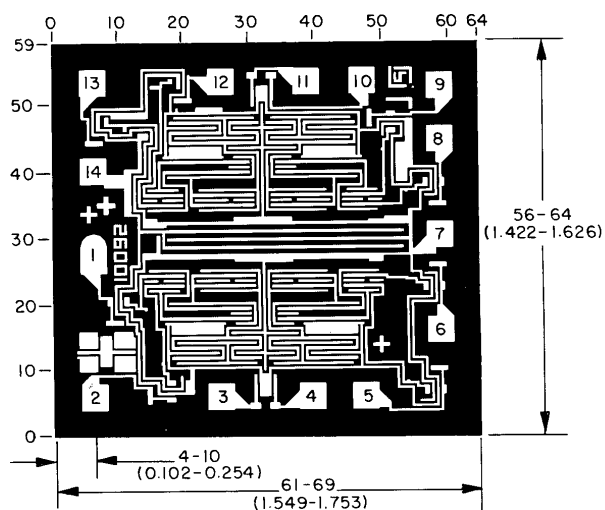
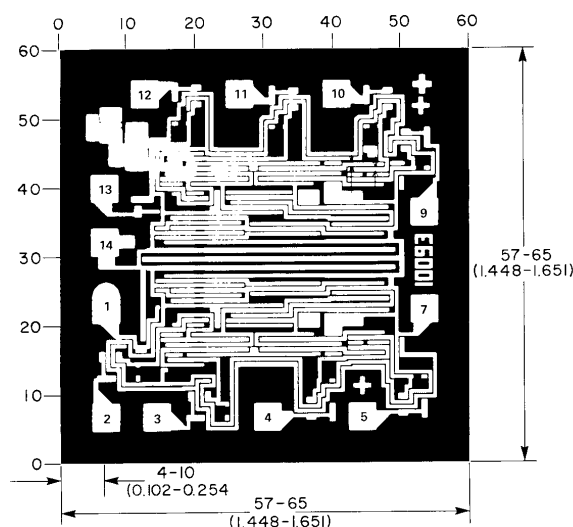


FIGURE 14. TYPICAL DYNAMIC POWER DISSIPATION PER GATE AS A FUNCTION OF FREQUENCY

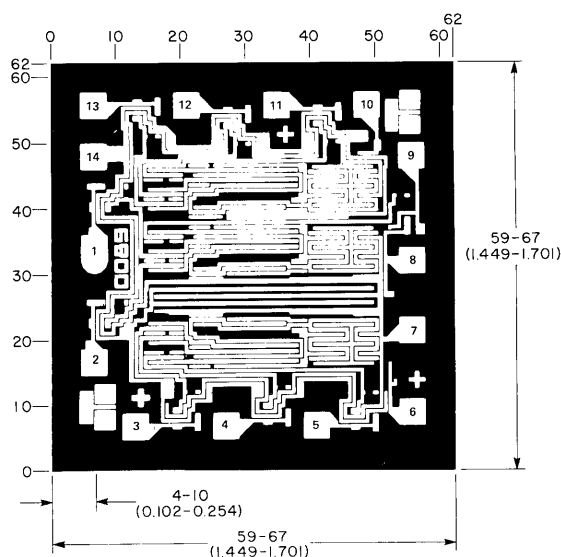
## Chip Dimensions and Pad Layouts



CD4081BMS



CD4082BMS



CD4073BMS

Dimensions in parentheses are in millimeters and are derived from the basic inch dimensions as indicated.

Grid graduations are in mils ( $10^{-3}$  inch)

**METALLIZATION:** Thickness:  $11\text{k}\text{\AA} - 14\text{k}\text{\AA}$ , AL.

**PASSIVATION:**  $10.4\text{k}\text{\AA} - 15.6\text{k}\text{\AA}$ , Silane

**BOND PADS:** 0.004 inches X 0.004 inches MIN

**DIE THICKNESS:** 0.0198 inches - 0.0218 inches

All Intersil semiconductor products are manufactured, assembled and tested under **ISO9000** quality systems certification.

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