MOTOROLA Semiconductors
BOX 20912 • PHOENIX, ARIZONA 85036

MC14011
MC14011B

QUAD 2-INPUT "NAND" GATE

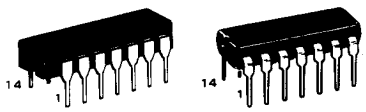
The MC14011 and MC14011B are constructed with P and N channel enhancement mode devices in a single monolithic structure (Complementary MOS). Their primary use is where low power dissipation and/or high noise immunity is desired.

- Quiescent Current = 0.5 nA typ/pkg @ 5 Vdc
- Noise Immunity = 45% of V_{DD} typ
- Supply Voltage Range = 3.0 Vdc to 18 Vdc
- All Outputs Buffered (MC14011B only)
- Capable of Driving Two Low-power TTL Loads, One Low-power Schottky TTL Load or Two HTL Loads Over the Rated Temperature Range. (MC14011B only)
- Double Diode Protection on All Inputs
- Pin-for-Pin Replacements for CD4011A and CD4011B

McMOS SSI

(LOW-POWER COMPLEMENTARY MOS)

QUAD 2-INPUT "NAND" GATE



L SUFFIX
CERAMIC PACKAGE
CASE 632

P SUFFIX
PLASTIC PACKAGE
CASE 646

ORDERING INFORMATION

MC14XXXB — Suffix — Denotes

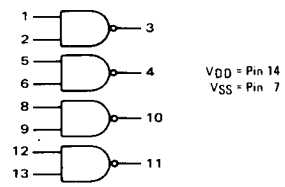
Delete for Non-B Device

- L Ceramic Package
- P Plastic Package
- A Extended Operating Temperature Range
- C Limited Operating Temperature Range

MAXIMUM RATINGS (Voltages referenced to V_{SS})

Rating	Symbol	Value	Unit
DC Supply Voltage	V_{DD}	-0.5 to +18	Vdc
Input Voltage, All Inputs	V_{in}	-0.5 to V_{DD} +0.5	Vdc
DC Current Drain per Pin	I	10	mAdc
Operating Temperature Range AL Device CL/CP Device	T_A	-55 to +125 -40 to +85	°C
Storage Temperature Range	T_{stg}	-65 to +150	°C

LOGIC DIAGRAM



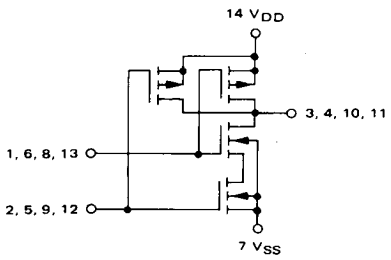
V_{DD} = Pin 14
V_{SS} = Pin 7

See the MC14001 data sheet for complete characteristics for the non-B device.

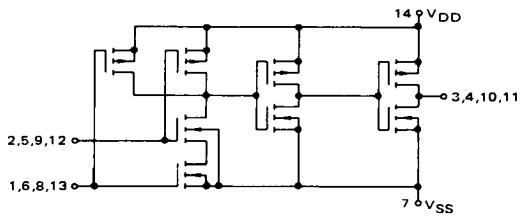
See the MC14001B data sheet for complete characteristics of the B-Series device.

CIRCUIT SCHEMATICS (1/4 of Device Shown)

MC14011



MC14011B



This device contains circuitry to protect the inputs against damage due to high static voltages or electric fields; however, it is advised that normal precautions be taken to avoid application of any voltage higher than maximum rated voltages to this high impedance circuit. For proper operation it is recommended that V_{in} and V_{out} be constrained to the range $V_{SS} \leq (V_{in}$ or $V_{out}) \leq V_{DD}$.
Unused inputs must always be tied to an appropriate logic voltage level (e.g., either V_{SS} or V_{DD}).