MOTOROLA

MC14071B

CMOS SSI

(LOW-POWER COMPLEMENTARY MOS)

QUAD 2-INPUT "OR" GATE

FOR COMPLETE DATA SEE MC14001B

QUAD 2-INPUT "OR" GATE

The MC14071B is constructed with P and N channel enhancement mode devices in a single monolithic structure (Complementary MOS). The primary use is where low power dissipation and/or high noise immunity is desired.

- Supply Voltage Range = 3.0 Vdc to 18 Vdc
- All Outputs Buffered
- Capable of Driving Two Low-Power TTL Loads or One Low-Power Schottky TTL Load Over the Rated Temperature Range
- Double Diode Protection on All Inputs
- Pin-for-Pin Replacement for CD4071B

L SUFFIX
CERAMIC PACKAGE
CASE 632

P SUFFIX
PLASTIC PACKAGE
CASE 646

ORDERING INFORMATION

A Series: −55°C to +125°C
MC14XXXBAL (Ceramic Package Only)

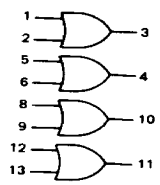
C Series: −40°C to +85°C
MC14XXXBCP (Plastic Package)
MC14XXXBCL (Ceramic Package)

MAXIMUM RATINGS* (Voltages Referenced to V_{SS})

Symbol	Parameter	Value	Unit
V_{DD}	DC Supply Voltage	−0.5 to +18.0	V
V_{in}, V_{out}	Input or Output Voltage (DC or Transient)	−0.5 to V_{DD} +0.5	V
I_{in}, I_{out}	Input or Output Current (DC or Transient), per Pin	±10	mA
P_D	Power Dissipation, per Package†	500	mW
T_{stg}	Storage Temperature	−65 to +150	°C
T_L	Lead Temperature (8-Second Soldering)	260	°C

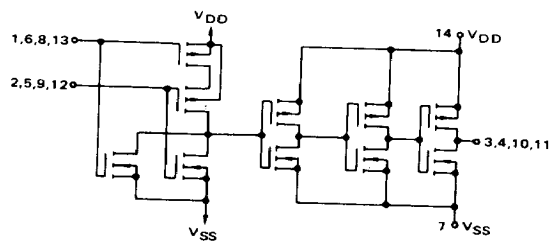
*Maximum Ratings are those values beyond which damage to the device may occur.
†Temperature Derating: Plastic "P" Package: −12mW/°C from 65°C to 85°C
Ceramic "L" Package: −12mW/°C from 100°C to 125°C

LOGIC DIAGRAM



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

CIRCUIT SCHEMATIC
(1/4 of Device Shown)



This device contains protection circuitry to guard against damage due to high static voltages or electric fields. However, precautions must be taken to avoid applications of any voltage higher than maximum rated voltages to this high-impedance circuit. For proper operation, V_{in} and V_{out} should 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}). Unused outputs must be left open.

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