



MOTOROLA

Product Preview

4-BIT BINARY FULL ADDER WITH FAST CARRY

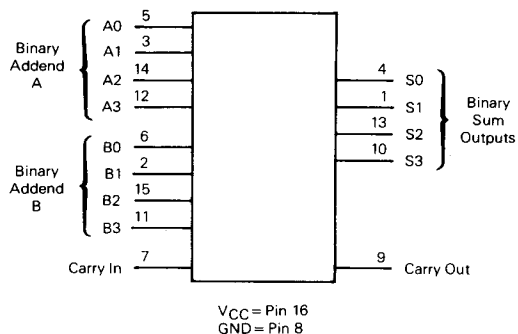
The MC54/74HC283 is identical in pinout to the LS283. The device inputs are compatible with standard CMOS outputs; with pullup resistors, they are compatible with LSTTL outputs.

The HC283 is a high-speed 4-bit binary Full Adder with internal carry lookahead. The device adds two 4-bit words (A and B) plus the Carry-In bit. The binary sum appears at the Sum outputs (S), and any resulting carries appear at the Carry-Out pin.

Because of the symmetry of the binary add function, the HC283 can be used with either all inputs and outputs active high (positive logic), or with all inputs and outputs active low (negative logic). With active high inputs, Carry In cannot be left open, but must be held low when no carry in is intended.

- Low Power Consumption Characteristic of CMOS Devices
- Output Drive Capability: 10 LSTTL Loads Minimum
- Operating Speeds Similar to LSTTL
- Wide Operating Voltage Range: 2 to 6 Volts
- Low Input Current: 1 μ A Maximum
- Low Quiescent Current: 80 μ A Maximum (74HC Series)
- High Noise Immunity Characteristic of CMOS Devices
- Diode Protection on All Inputs

BLOCK DIAGRAM

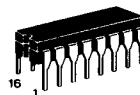


MC54/74HC283

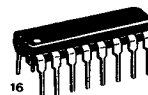
HIGH-PERFORMANCE CMOS

LOW-POWER COMPLEMENTARY MOS
SILICON-GATE

4-BIT BINARY FULL ADDER WITH FAST CARRY



J SUFFIX
CERAMIC PACKAGE
CASE 620



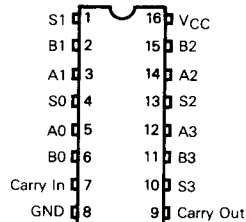
N SUFFIX
PLASTIC PACKAGE
CASE 648

ORDERING INFORMATION

54 Series: -55°C to $+125^{\circ}\text{C}$
MC54HCXXXJ (Ceramic Package Only)

74 Series: -40°C to $+85^{\circ}\text{C}$
MC74HCXXXN (Plastic Package)
MC74HCXXXJ (Ceramic Package)

PIN ASSIGNMENT



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