



MM54HC4316/MM74HC4316 Quad Analog Switch with Level Translator

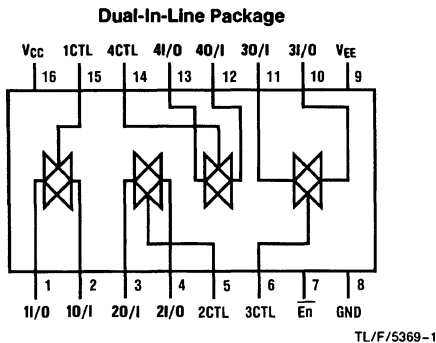
General Description

These devices are digitally controlled analog switches implemented in advanced silicon-gate CMOS technology. These switches have low "on" resistance and low "off" leakages. They are bidirectional switches, thus any analog input may be used as an output and vice-versa. Three supply pins are provided on the '4316 to implement a level translator which enables this circuit to operate with 0–6V logic levels and up to $\pm 6V$ analog switch levels. The '4316 also has a common enable input in addition to each switch's control which when low will disable all switches to their off state. All analog inputs and outputs and digital inputs are protected from electrostatic damage by diodes to V_{CC} and ground.

Features

- Typical switch enable time: 20 ns
- Wide analog input voltage range: $\pm 6V$
- Low "on" resistance: 50 Ω typ. ($V_{CC}-V_{EE}=4.5V$)
30 Ω typ. ($V_{CC}-V_{EE}=9V$)
- Low quiescent current: 80 μA maximum (74HC)
- Matched switch characteristics
- Individual switch controls plus a common enable

Connection and Logic Diagrams



Top View

Order Number MM54HC4316* or MM74HC4316*

*Please look into Section 8, Appendix D for availability of various package types.

Truth Table

| Inputs | | Switch |
|-----------------|-----|---------|
| \overline{En} | CTL | I/O–O/I |
| H | X | "OFF" |
| L | L | "OFF" |
| L | H | "ON" |

See the CMOS Logic Databook for Complete Specifications

