

1. General Description

The EM74HCS08 is a quad 2-input AND gate with Schmitt-trigger inputs. Schmitt trigger inputs transform slowly changing input signals into sharply defined jitter-free output signals.

2. Features and Benefits

- Wide supply voltage range from 2.0 V to 6.0 V
- High noise immunity
- CMOS low power dissipation
- Latch-up performance exceeds 250 mA
- Unlimited rise and fall times
- Complies with JEDEC standards:
 - JESD8C (2.7 V to 3.6 V)
 - JESD7A (2.0 V to 6.0 V)
- ESD protection:
 - HBM ANSI/ESDA/JEDEC JS-001 Class 2 exceeds 3500 V
 - CDM ANSI/ESDA/JEDEC JS-002 Class C3 exceeds 2000 V
- Multiple package options

3. Ordering Information

Table 1. Ordering information

| Type number | Package | | |
|-------------|-----------|---|----------|
| | Name | Description | Quantity |
| EM74HCS08D | SOP-14L | plastic small outline package; 14 leads; body width 3.9 mm | 3000 |
| EM74HCS08PW | TSSOP-14L | plastic thin shrink small outline package; 14 leads; body width 4.4 mm | 3000 |

4. Function Diagram

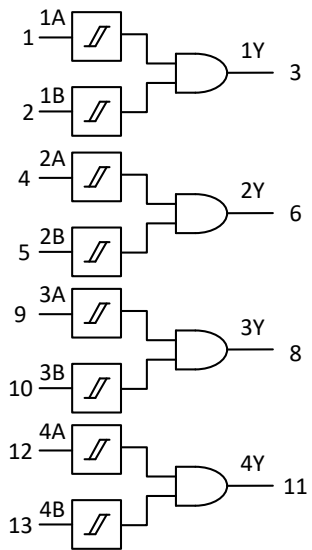


Fig. 1. Logic symbol

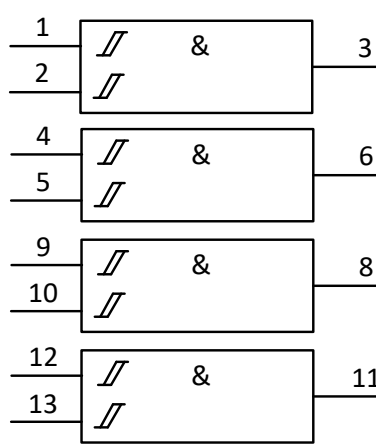


Fig. 2. IEC logic symbol

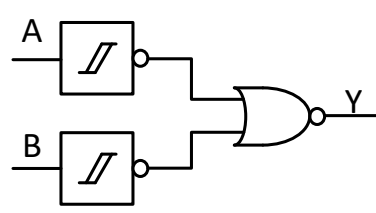
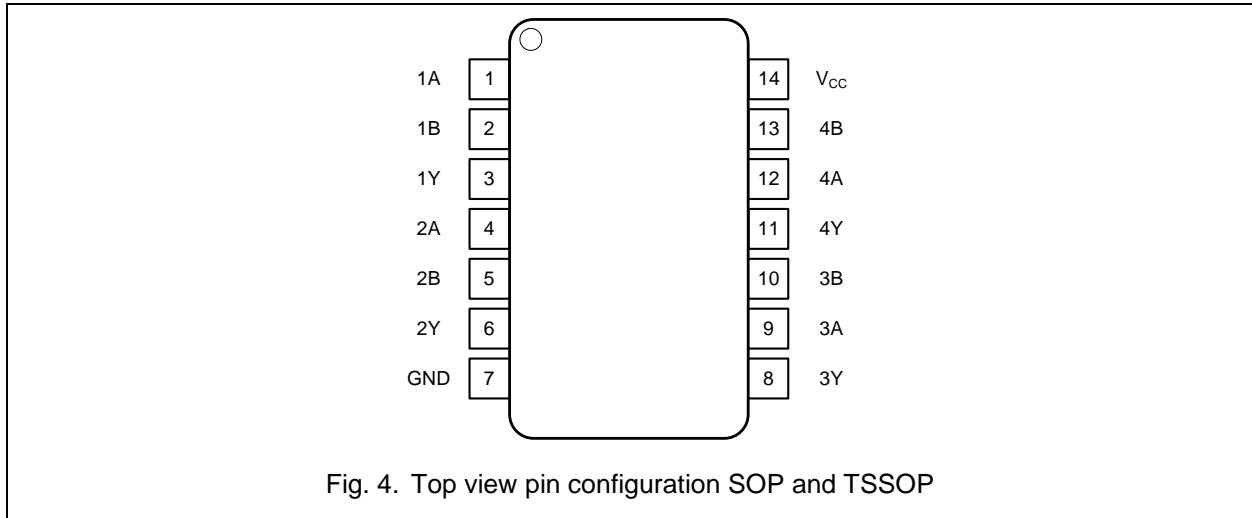


Fig. 3. Logic diagram for one Schmitt trigger

5. Pinning Information

5.1. Pinning



5.2. Pin description

Table 2. Pin description

| Symbol | Pin | Description |
|-----------------|--------------|----------------|
| 1A, 2A, 3A, 4A | 1, 4, 9, 12 | Data input |
| 1B, 2B, 3B, 4B | 2, 5, 10, 13 | Data input |
| 1Y, 2Y, 3Y, 4Y | 3, 6, 8, 11 | Data output |
| GND | 7 | Ground (0V) |
| V _{cc} | 14 | Supply voltage |

6. Functional Description

Table 3. Function table

H = HIGH voltage level; L = LOW voltage level.

| Control | | Output |
|---------|----|--------|
| nA | nB | nY |
| L | L | L |
| L | H | L |
| H | L | L |
| H | H | H |