

74LCX109

Dual J-K Flip-Flops with Preset and Clear with 5V Tolerant Inputs

General Description

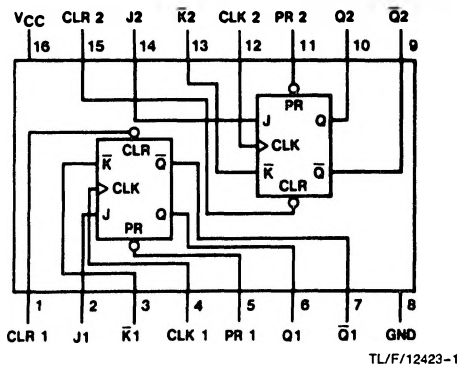
The 74LCX109 are dual J-K flip-flops. Each flip-flop has independent J, \bar{K} , PRESET, CLEAR, and CLOCK inputs and Q, \bar{Q} outputs. These devices are edge sensitive and change state on the negative going transition of the clock pulse. Clear and preset are independent of the clock and accomplished by a low logic level on the corresponding input. LCX devices are designed for low voltage (3.3V) operation with the added capability of interfacing to a 5V signal environment.

The 74LCX109 is fabricated with advanced CMOS technology to achieve high speed operation while maintaining CMOS low power dissipation.

Features

- 5V tolerant inputs
- Power down high impedance inputs and outputs
- 2.0V–3.6V V_{CC} supply operation
- ± 24 mA output drive
- Implements patented Quiet Series™ noise/EMI reduction circuitry
- Functionally compatible with 74 series 109
- Latch-up performance exceeds 500 mA
- ESD performance:
 - Human body model > 2000V
 - Machine model > 200V

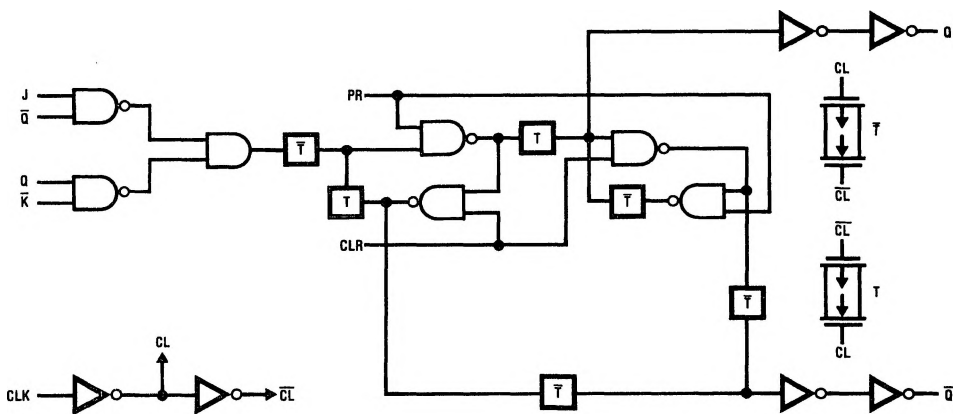
Connection and Logic Diagrams



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Function Table

| Inputs | | | | | Outputs | |
|--------|-----|-----|---|-----------|---------|------------|
| PR | CLR | CLK | J | \bar{K} | Q | \bar{Q} |
| L | H | X | X | X | H | L |
| H | L | X | X | X | L | H |
| L | L | X | X | X | H* | H* |
| H | H | ↑ | L | L | L | H |
| H | H | ↑ | H | L | TOGGLE | TOGGLE |
| H | H | ↑ | L | H | Q0 | $\bar{Q}0$ |
| H | H | ↑ | H | H | H | L |
| H | H | L | X | X | Q0 | $\bar{Q}0$ |



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