

Switchable Crystal Oscillator

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The circuit shows a switchable crystal oscillator which can generate any one of a number of set frequencies. Using the high-speed LT1394 comparator from Linear Technology (www.linear-tech.com) it is possible to build a crystal oscillator by putting the crystal in the negative feedback path, while an RC network in the positive feedback path provides the required phase lag.

Switching between the crystals is simply achieved using diodes (type 1N4148). The diode corresponding to the crystal to be selected is forward biased via its 1 k Ω series resistor, while all the other inputs to the circuit must remain at ground potential. Any crystals suitable for fundamental frequency operation in the range 1 MHz to 15 MHz can be used. Use of a comparator guarantees that the output signal is a squarewave.

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